APPENDIX 4
BIOLOGICAL TECHNICAL REPORT

Biological Technical Report
for the
Container Storage Project

San Bernardino County, California

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
BNSF	Burlington Northern Santa Fe Railway
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPSEI	California Native Plan Society's Electronic Inventory
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ECORP	ECORP Consulting, Inc.
ESA	Endangered Species Act
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MSHCP	Multiple Species Habitat Conservation Plan
NCCP	Natural Community Conservation Plan
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHV	Off-Highway Vehicle
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSC	California Species of Special Concern
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

On behalf of Earl Graham (Project Proponent), ECORP Consulting, Inc. (ECORP) conducted a biological reconnaissance survey at an approximately 47.10-acre property (Assessor's Parcel Numbers 0438-163-24, 0438-163-37, 0438-163-43, and 0438-163-44) and a portion of the public right-of-way along Deep Creek Road (Study Area) in the Town of Apple Valley, San Bernardino County, California. The survey was conducted to identify any potential biological resources that could be affected by the proposed Container Storage Project (Project), pursuant to the terms of the California Environmental Quality Act (CEQA) and for the purposes of identifying any biological constraints that would affect the proposed site plan for the Project. The Project will be subject to county, state, and federal regulations regarding compliance with the federal Endangered Species Act (ESA), California ESA, Migratory Bird Treaty Act (MBTA), Clean Water Act (CWA) regulations, and California Fish and Game Code.

1.1 Project Location and Description

The Study Area is approximately 47 acres and is located east of Interstate 15 within the Town of Apple Valley, San Bernardino County, California (Figure 1). The Study Area is bounded by a Burlington Northern Santa Fe (BNSF) railroad to the south and east, Deep Creek Road and residential homes to the west, and vacant land to the north and south. Surrounding land uses consist mainly of rural residential development, undeveloped land, and roads. The Study Area, as depicted on the U.S. Geological Survey (USGS) 7.5-minute *Apple Valley South, California* topographic quadrangle, lies within Section 20 of Township 4 North, and Range 3 West (Figure 2.). The elevation of the Study Area ranges from approximately 2,890 to 2,950 feet (ft) above mean sea level (msl). The Project proposes a Conditional Use Permit (CUP) to allow for the continuation of a 17.89-acre freight container storage area (Project Area, Figure 1) within the Study Area currently operating under a Temporary Use Permit (TUP).

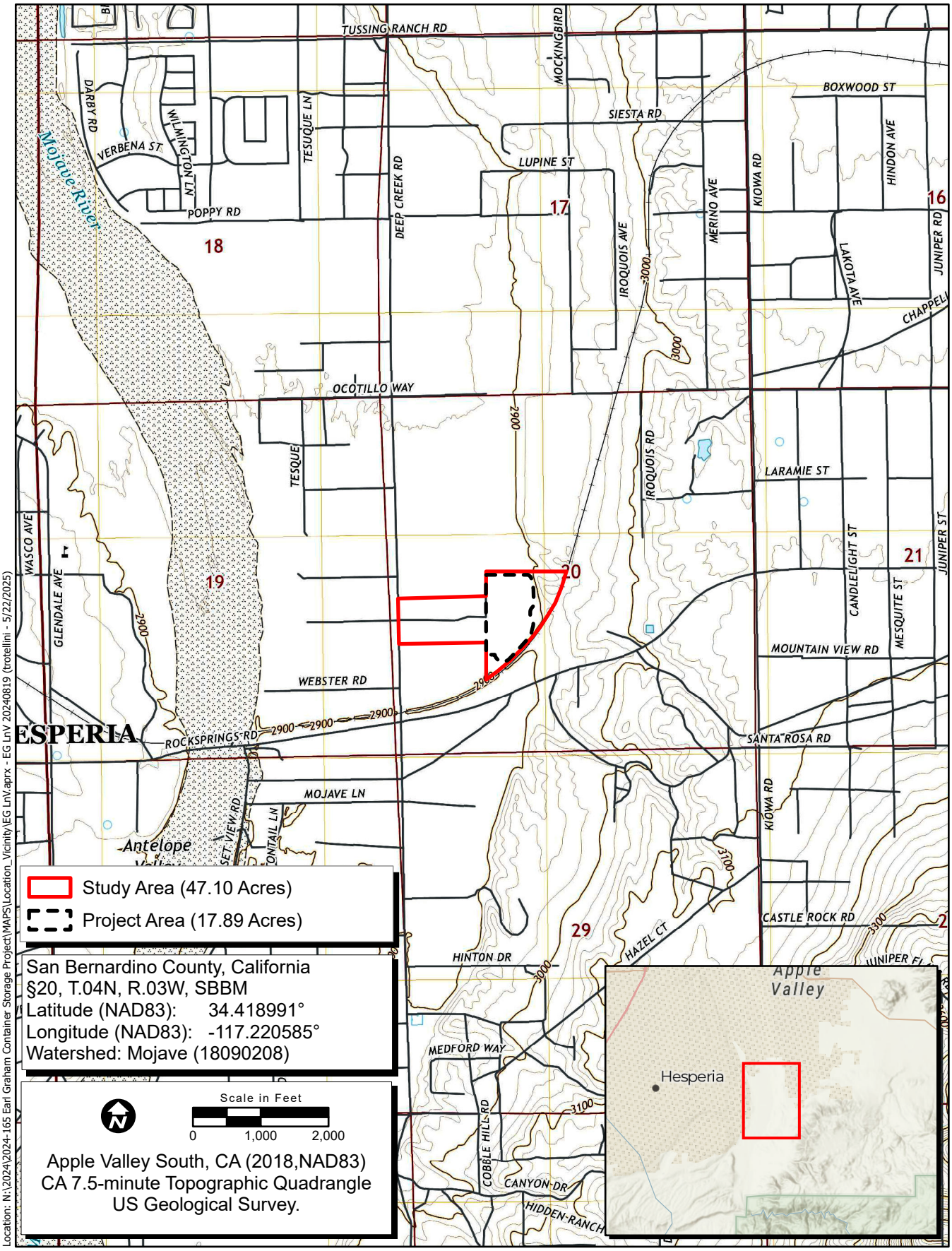
2.0 SPECIAL-STATUS SPECIES REGULATIONS

This biological reconnaissance survey was conducted to identify potential biological resource constraints and ensure compliance with state and federal regulations regarding listed, protected, and sensitive species. The regulations are detailed below.

2.1 Federal Regulations

2.1.1 The Federal Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "*harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct*" (50 Code of Federal Regulations [CFR] 17.3).



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Map Date: 5/22/2025

Sources: ESRI, USGS

Figure 1. Project Location and Vicinity

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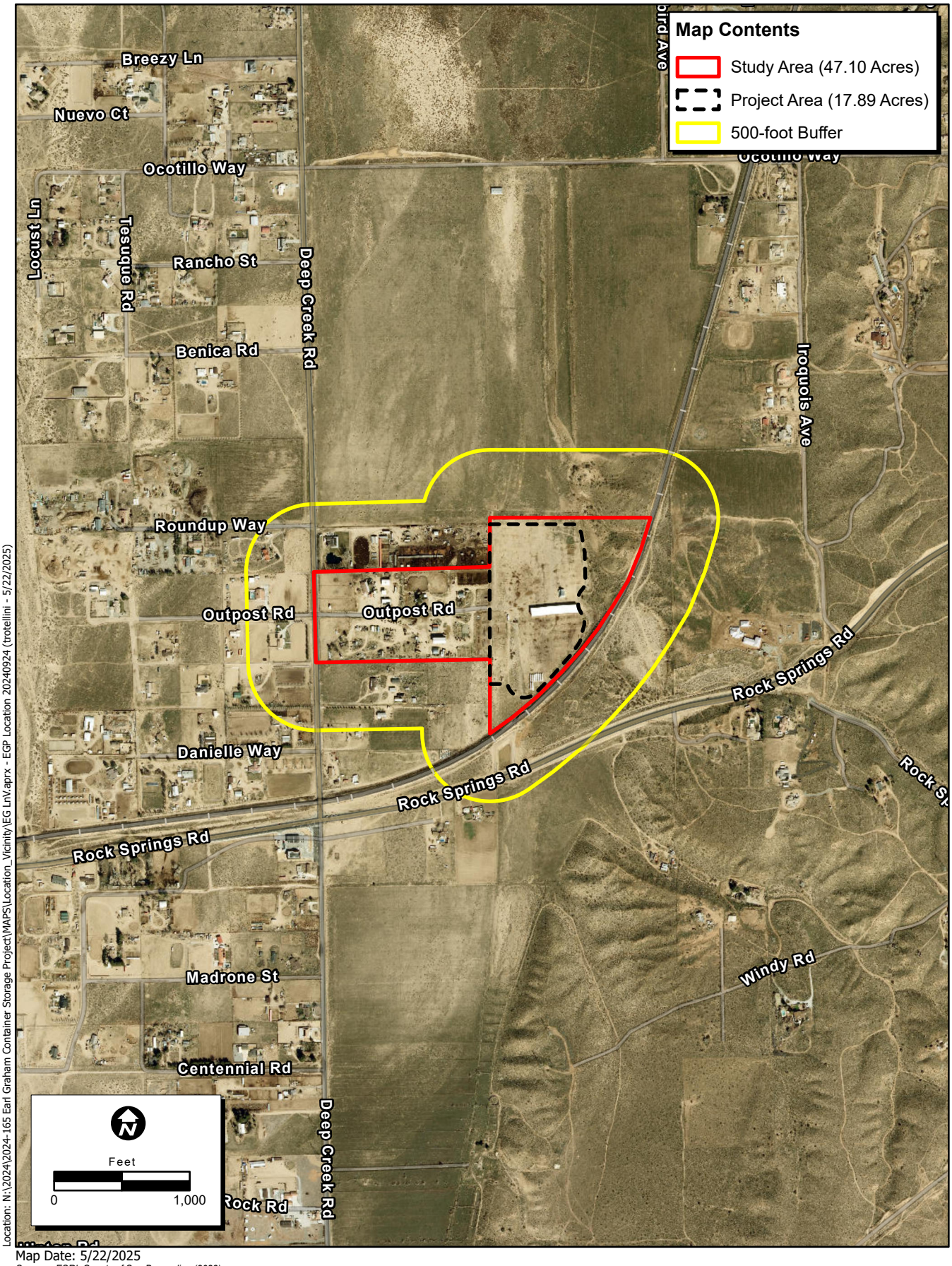

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Map Date: 5/22/2025

Sources: ESRI, County of San Bernardino (2023)

Figure 2. Project Location

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2024-165 Earl Graham Container Storage Project

For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits (ITPs) where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

2.1.2 Migratory Bird Treaty Act

The MBTA implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities including hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Federal Clean Water Act

The CWA's purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency acts as a cooperating agency to set policy, guidance, and criteria for use in evaluation permit applications and reviews USACE permit applications.

The USACE regulates fill or dredging of fill material within its jurisdictional features. Fill material means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Quality Control Board, administered by each of nine California Regional Water Quality Control Boards (RWQCB).

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill*." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing ITPs for fully protected species, except for necessary scientific research.

2.2.3 California Fish and Game Code

2.2.3.1 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "*preserve, protect and enhance rare and endangered plants in this State*." The NPPA is administered by CDFW. The California Fish and Game Commission (Commission) has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code § 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.3.2 Streambed Alteration Agreement

Pursuant to Section 1602 of the California Fish and Game Code, a Streambed Alteration Agreement (SAA) application must be submitted for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake" (CDFW 2024a). In Title 14 of the Code of California Regulations (CCR), Section 1.72, the CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel

having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

In Chapter 9, Section 2785 of the Fish and Game Code, *riparian habitat* is defined as "lands which contain habitat which grows close to, and which depends upon, soil moisture from a nearby freshwater source." The CDFW's jurisdiction includes drainages with a definable bed, bank, or channel with the jurisdictional limit being the top-of-bank. It also includes areas that support intermittent, perennial, or subsurface flows; supports fish or other aquatic life; or supports riparian or hydrophytic vegetation. It also includes areas that have a hydrologic source.

The CDFW will determine if the proposed actions will result in diversion, obstruction, or change of the natural flow, bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The CDFW will submit an SAA that includes measures to protect affected fish and wildlife resources; this SAA is the final proposal agreed upon by the CDFW and the applicant.

2.2.3.3 Migratory Birds

The CDFW enforces the protection of nongame native birds in §§ 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code § 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.3.4 Bats and Bat Roosts

Bats in California are currently protected directly and indirectly by the California Fish and Game Code, Sections 86, 1600, 2000, 2014, 3007, and 4150; California Public Resources Code, Division 14, Section 21000 et seq.; and CCR, Title 14 including, but not limited to Section 251.1, CEQA regulations (Section 15000 et seq.), and Section 15382 – Significant Effect on the Environment.

Regulations of particular relevance to the protection of bats and bat roosts include Title 14, Section 251.1 of the CCR, which prohibits harassment (defined in that section as an intentional act that disrupts an animal's normal behavior patterns, including breeding, feeding, or sheltering) of nongame mammals (e.g., bats), and California Fish and Game Code Section 4150, which prohibits *take* or possession of all nongame mammals or parts thereof. Any activities resulting in bat mortality (e.g., the destruction of an occupied bat roost that results in the death of bats), disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), or various modes of nonlethal pursuit or capture may be considered *take* as defined in Section 86 of the California Fish and Game Code. In addition, impacts to bat maternity colonies, which are considered native wildlife nursery sites, could be considered significant under CEQA.

2.2.4 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination

System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB also regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

2.2.5 California Environmental Quality Act Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the Project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason is that although the

impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

2.2.6 California Desert Native Plants Act

The California Desert Native Plants Act (CDNPA) is outlined in Division 23 of the California Food and Agriculture Code (Sections 80001-80201). This Act serves to protect California desert native plants from unlawful harvesting on both public and privately owned lands throughout Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. In order to harvest a protected plant, a permit must be issued by the county's commissioner or sheriff. Native plants protected under this Act include, but are not limited to, bristlecone pine (*Pinus longaeva*), fan palm (*Washingtonia filifera*), and all species of the family Agavaceae.

2.2.7 Western Joshua Tree Conservation Act

The Western Joshua Tree Conservation Act was passed by the senate and signed by Governor Gavin Newsom on June 27, 2023, and took effect on July 1, 2023. This Act prohibits any person or public agency from importing into the state, exporting out of the state, taking, possessing, purchasing, or selling within the state, a western Joshua tree or any part or product of the tree except as authorized pursuant to the California ESA, the Natural Community Conservation Planning Act, or as outlined in Section 1927.2 of the Act.

Chapter 2 states that while the western Joshua tree remains a Candidate under California ESA, any person or public agency seeking a take authorization for the species may obtain a take authorization as provided by the California ESA or by electing to pay the fees set forth in Section 1927.3.

If the Fish and Game Commission (Commission) decides that listing is not warranted, Chapter 2 will remain operative and the authorization of take of a western Joshua tree shall be pursuant to the Chapter. If the Commission determines that listing is warranted, Chapter 2 will become inoperative and the authorization of take of a western Joshua tree shall only be pursuant to Chapter 1.5 of Division 3 or pursuant to the Natural Community Conservation Planning Act (Chapter 10 [commencing with Section 2800] of Division 3 of the Fish and Game Code).

The Western Joshua Tree Conservation Act defines what requires mitigation and what conditions must be met for authorization of take, via permit, of western Joshua tree. Additionally, the Western Joshua Tree Conservation Act establishes the Western Joshua Tree Conservation Fund, formerly the Western Joshua Tree Mitigation Fund, for the purpose of acquiring, conserving, and managing western Joshua tree conservation lands and other activities aimed at conserving the species. The Act also requires CDFW, in collaboration with government agencies, California Native American Tribes, and the public, to create the Western Joshua Tree Conservation Plan with a complete draft presented to the Fish and Game Commission no later than December 31, 2024.

2.2.8 San Bernardino County Protections

2.2.8.1 San Bernardino County Biotic Resources Overlay

The San Bernardino County Biotic Resources Overlay was established by the Land Use Plan and Land Use Zoning Districts (§§ 82.01.020) and the Overlays (§§ 82.01.0230) of the County of San Bernardino. The purpose of the Biotic Resources Overlay is to implement General Plan policies regarding the "protection and conservation of beneficial rare and endangered plants and animal resources and their habitats" (San Bernardino County 2024a). Projects within the County of San Bernardino are required to address the biological resources that appear within the Biotic Resources Overlay and overlap with their Project Area. Further, project proponents must identify mitigation measures that will reduce or eliminate impacts to the identified resources.

2.2.8.2 Desert Native Plant Protection

All species of the family Agavaceae, all Joshua trees, all species of mesquite (*Neltuma odorata* and *Strombocarpa pubescens*), and all species of palo verde (*Parkinsonia* spp.) are considered regulated desert native plants under the *San Bernardino County Development Code – Plant Protection and Management (Chapter 88.01)* (San Bernardino County 2024b).

The Development Code Plant Protection and Management Chapter 88.01 requires that a Tree or Plant Removal Permit be obtained prior to the removal of a regulated tree or plant identified in the chapter on public or private land, which includes the western Joshua tree (Section 88.01.050). Projects that will result in the removal of any species protected under this development code must seek prior approval from San Bernardino County via a Tree or Plant Removal Permit prior to the start of ground-disturbing activities. During the permit review process, the County may require certification from an appropriate arborist, registered professional forester, or a Desert Native Plant Expert that any proposed plant removal activities are appropriate, supportive of a healthy environment, and in compliance with Chapter 88.01 of the Development Code, which may require a health assessment of the affected plant(s).

2.2.9 Town of Apple Valley Development Code – Plant Protection and Management (Chapter 9.76)

The Town of Apple Valley has established a Plant Protection and Management Code (Chapter 9.76) to help protect and preserve desert vegetation. The following desert native plants are subject to the statutes in Chapter 9.76 of the Town of Apple Valley Development Code:

- The following desert native plants with stems two inches or greater in diameter or six ft or greater in height (Scientific names listed below reflect the most recent accepted taxonomy.
    - Smoketree (*Psorothamnus spinosus*)
    - All species of the family Agavaceae
    - All species of the family Cactaceae
    - All species in the genus *Nolina*

- All species of mesquite (*Neltuma odorata* and *Strombocarpa pubescens*)

- Creosote rings, ten ft or greater in diameter (A creosote ring is a clonal colony of creosote bushes that form a ring around the parent plant).
- All western Joshua trees (*Yucca brevifolia*; mature and immature).

The Town of Apple Valley Plant Protection and Management Code requires that a permit be obtained from the Town Manager, or designee, prior to the removal of a regulated desert native plant identified in the chapter on public or private land.

2.2.10 Town of Apple Valley Multiple Species Habitat Conservation Plan

The Town of Apple Valley alongside the County of San Bernardino, USFWS, CDFW, and Bureau of Land Management are in the process of preparing a Multiple Species Habitat Conservation Plan (MSHCP)/ NCCP. The MSHCP/NCCP will guide conservation efforts within the Plan Area and focus on the preservation of open space and of threatened and endangered species. The Plan will also streamline the environmental permitting process for projects within the Plan Area. In 2017, the Town of Apple Valley, USFWS, and CDFW published a planning agreement for the MSHCP outlining the Plan Area, regulatory goals, a proposed covered species list, and more (Town of Apple Valley 2017, 2021, and 2023).

3.0 METHODS

3.1 Literature Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Database (CNDDB; CDFW 2024b) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI; CNPS 2024a) to determine the special-status plant and wildlife species that have been documented near the Study Area . ECORP searched CNDDB and CNPSEI records within the Study Area boundaries as depicted on USGS 7.5-minute Apple Valley South topographic quadrangle, plus the surrounding eight topographic quadrangles including Apple Valley North, Fairview Valley, Silverwood Lake, Lake Arrowhead, Butler Peak, Hesperia, Fifteenmile Valley, and Victorville. The CNDDB and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), and/or other special-status species or habitat that may occur within or near the Project. Additional information was gathered from the following sources and includes, but is not limited to:

- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2024c);
- Special Animals List (CDFW 2024d);
- Jepson eFlora (Jepson 2024);
- A Manual of California Vegetation, Online Edition (CNPS 2024b);
- Town of Apple Valley MSHCP (Town of Apple Valley 2017. 2021, and 2023); and
- Countywide – All Biotic Resources Overlay Map (San Bernardino County 2012); and

- various online websites (e.g., Calflora 2024).

Using this information and observations in the field, a list of special-status plant and animal species that have the potential to occur on or near the Study Area was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal ESA or California ESA;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515; and/or
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the site were assessed for their potential to occur within the Study Area based on the following guidelines:

- **Present:** The species was observed on site during a site visit or focused survey.
- **High:** Habitat (including soils and elevation factors) for the species occurs within the Study Area and a known occurrence has recently been recorded (within the last 20 years) within 5 miles of the area.
- **Moderate:** Habitat (including soils and elevation factors) for the species occurs within the Study Area and a documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Study Area ; or a recently documented observation occurs within 5 miles of the area and marginal or limited amounts of habitat occurs in the Study Area .
- **Low:** Limited or marginal habitat for the species occurs within the Study Area and a recently documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Study Area ; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.
- **Presumed Absent:** Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the Study Area.

Note that location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that species.

A review of the Natural Resources Conservation Service Web Soil Survey (Natural Resources Conservation Service [NRCS] 2024a), NRCS Hydric Soils List (NRCS 2024b), National Wetlands Inventory (NWI) (USFWS 2024), and the corresponding USGS topographic maps was also conducted to determine if there were any blue line streams or drainages present on the Study Area that potentially fall under the jurisdiction of either federal or state agencies.

3.2 Field Survey

3.2.1 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted by walking or visually inspecting the entire Study Area and a 500-ft survey buffer, hereafter referred to as the Survey Area, to determine the vegetation communities and wildlife habitats present on the site. Areas that were not accessible by foot were scanned using binoculars for suitable habitat. The biologist documented the plant and animal species present within the Survey Area, and the location and condition of the Survey Area were assessed for the potential to provide habitat for special-status plant and wildlife species. Data were recorded on a GPS unit, field notebooks, and/or maps. Photographs were also taken during the survey to provide visual representation of the conditions within the Survey Area. The Survey Area was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region. In addition, the biologist documented the vegetation communities present within the Survey Area.

Plant and wildlife species, including any special-status species that were observed during the survey, were recorded. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows Society for the Study of Amphibians and Reptiles (2017), *Check-list of North American Birds* (Chesser et al. 2020), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded.

3.2.2 Aquatic Resources Delineation

A desktop review was conducted to identify potential aquatic features and hydric soils on the property. This entailed examination of the NRCS Web Soil Survey (NRCS 2024a), NWI mapping (USFWS 2024), aerial photography, and the USGS topographic mapping of the Study Area to aid in identifying potential biological constraints to the Project due to streams or other aquatic features. A formal aquatic resources delineation was conducted for the Project. Detailed methods used during the aquatic resources delineation are discussed in the Aquatic Resources Delineation report (ECORP 2025a).

4.0 RESULTS

Summarized below are the results of the literature review and field surveys, including site characteristics, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

The literature review and database searches identified 58 special-status plant species and 48 special-status wildlife species that could occur near the Study Area. A list was generated from the results of the literature review and the Study Area was evaluated for suitable habitat that could support any of the special-status plant or wildlife species on the list. The Study Area is located within the San Bernardino County biotic overlay for desert tortoise – sparse population, burrowing owl, and Mojave ground squirrel (San Bernardino County 2012).

4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat

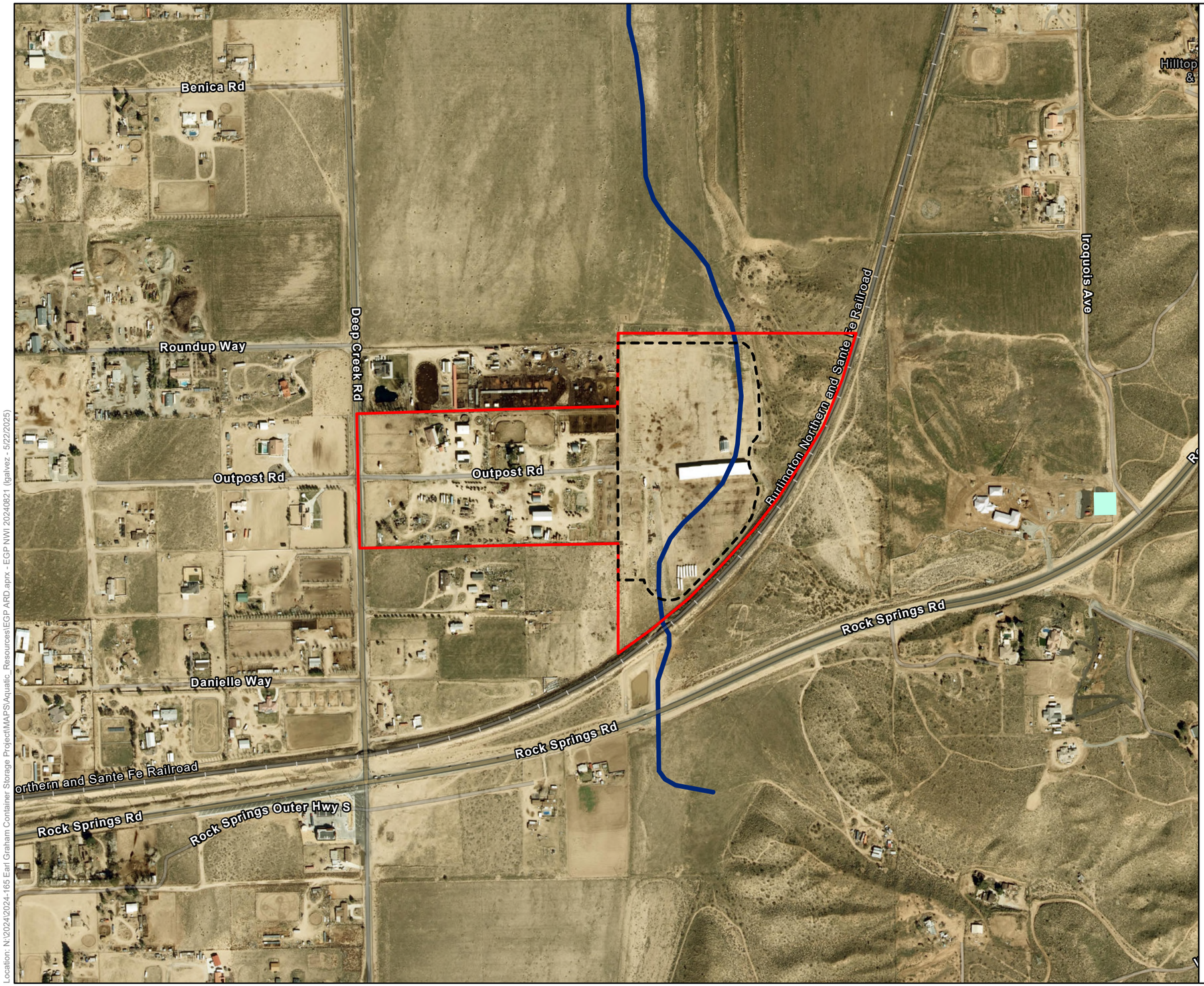
The Study Area is not located within any USFWS-designated critical habitat. Arroyo toad (*Anaxyrus californicus*) designated critical habitat occurs approximately four miles south of the Study Area. Additionally, southwestern willow flycatcher (*Empidonax traillii extimus*) designated critical habitat is present approximately four miles northwest and south of the Study Area. There are no expected impacts to the critical habitats for either species because the critical habitats are not in the immediate area of the Study Area. Additionally, there are no riparian habitat or intermittent streams suitable for habitat for either species present on the Study Area.

4.1.3 Aquatic Resources

The Cajon-Wasco, Cool Complex, 2 to 9 Percent Slopes soil type mapped by NRCS within the Study Area is considered to have hydric components (NRCS 2024b). The soil type contains riverwash components that can be considered hydric when present in channels and frequently flooded for long durations during the growing season. NWI mapping depicts one aquatic feature within the Study Area (Figure 3; USFWS 2024). This NWI feature is mapped as a riverine, classified as R4SBC, or *Riverine, Intermittent, Streambed, Seasonally Flooded*. The NWI mapped this riverine feature based on reconnaissance level data that is used to inform field survey efforts.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on September 10, 2024, by ECORP biologists Alexandra Dorough and Joshua Harris. Summarized below are the results of the biological reconnaissance survey, including site characteristics, plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the survey are summarized in Table 1.



Map Contents

- Study Area (47.10 Acres)
- Project Area (17.89 Acres)

NWI Type

- Freshwater Pond
- Riverine

Location: N:\2024\2024-165 Earl Graham Container Storage Project\MAPS\Aquatic_Resources\EGP ARD.aprx - EGP NWI 20240821 (galvez - 5/22/2025)

Map Date: 5/22/2025

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Scale in Feet
0 500

Figure 3. National Wetlands Inventory

2024-165 Earl Graham Container Storage Project

Table 1. Weather Conditions During the Survey								
Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Min	Max	Min	Max	Min	Max
9/10/2024	0730	1115	73	92	0	0	0-1	2-7

Note: °F = Degrees Fahrenheit; mph = miles per hour

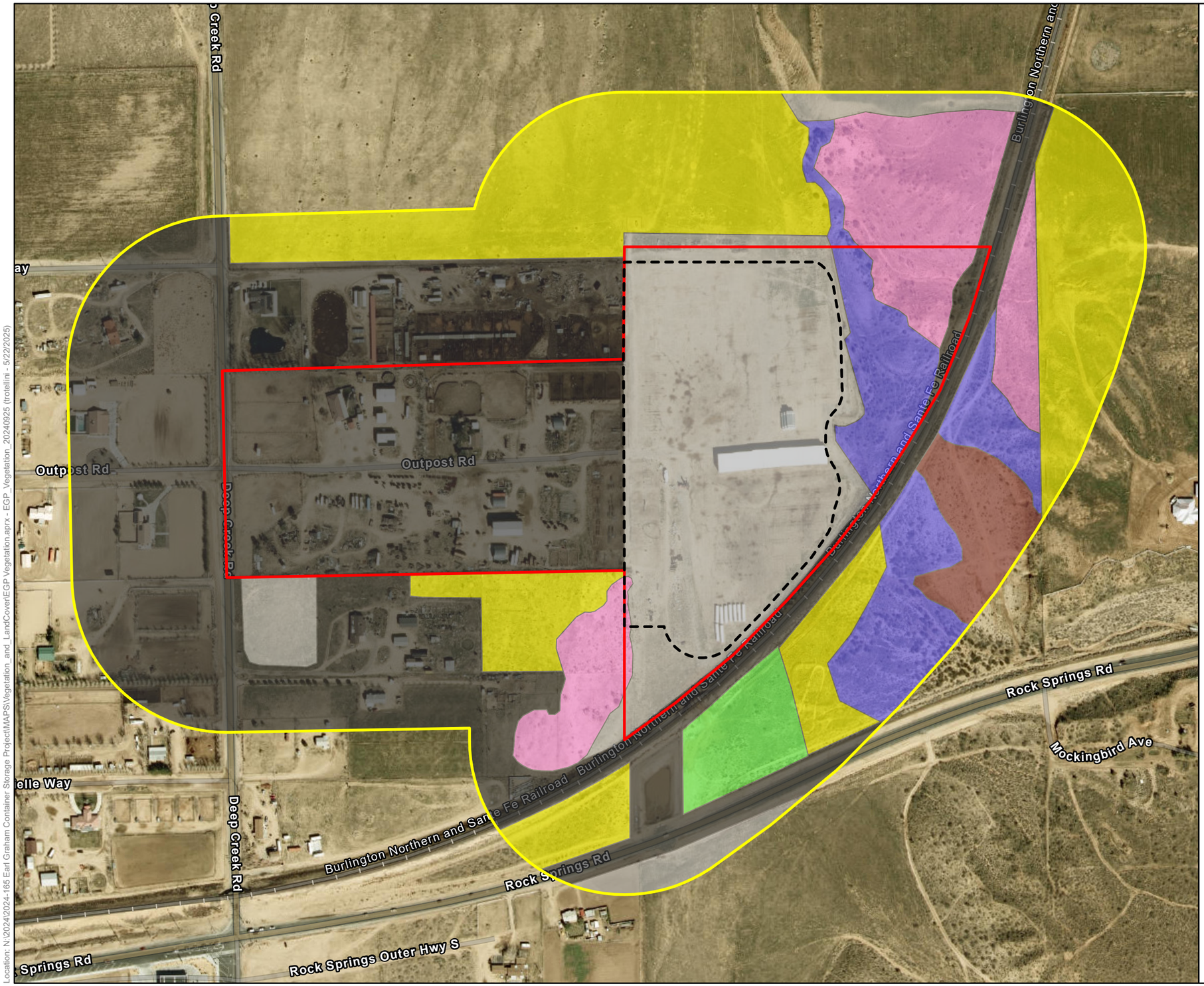
4.2.1 Property Characteristics

The Study Area consists of developed land with residential properties, structures to support livestock, and old agricultural fields that have been heavily disturbed. Native Joshua tree woodland habitat is present on the Study Area in the northeast corner of the area, as well as in a small sliver in the southern portion. Disturbances observed within the Study Area and the 500-ft survey buffer include vehicle tracks, storage of shipping containers and debris piles, dilapidated structures, and nonnative plant species. In addition, the biologists observed evidence of feral burros (*Equus asinus*) grazing including an observation of a pack of individuals as well as tracks and scat left behind. Two soil types are present within the Study Area: Cajon Sand, 9 to 15 Percent Slopes and Cajon-Wasco, Cool Complex, 2 to 9 Percent Slopes (NRCS 2024a). Representative Study Area photographs are presented in Appendix A.

4.2.2 Vegetation Communities

Five native vegetation communities were present in the Survey Area: creosote bush scrub (*Larrea tridentata* Shrubland Alliance), rubber rabbitbrush scrub (*Ericameria nauseosa* Shrubland Alliance), Joshua tree woodland (*Yucca brevifolia* Woodland Alliance), cheesebush scrub (*Ambrosia salsola* Shrubland Alliance), and California buckwheat scrub (*Eriogonum fasciculatum – Viguiera parishii* Shrubland Alliance) (Figure 4). Of these five communities, two are present in the Study Area: creosote bush scrub and Joshua tree woodland (Figure 4). All vegetation communities mapped within the Study Area had some level of anthropogenic disturbance. The level of disturbance varied among the vegetation communities and included the following: off-highway vehicle (OHV) trails, dirt roads, trash, debris piles, and nonnative plant and animal species. One land cover type was observed in the Project Area: disturbed (Figure 4). Vegetation community and land cover type descriptions are provided in the following sections. The acreages of each vegetation community and land cover type in the Study Area are provided in Table 2 below.

Table 2. Vegetation Communities and Land Covers in Study Area	
Vegetation Communities and Land Covers	**Acres**
Creosote bush scrub (disturbed)	3.34
Joshua tree woodland (disturbed)	1.79
Developed	20.80
Disturbed	21.17
Study Area Total:	**47.10**



Map Contents

- Study Area (47.10 Acres)
- Project Area (17.89 Acres)
- 500-foot Buffer

Vegetation Communities

- California buckwheat - Parish's Goldeneye Scrub (*Eriogonum fasciculatum - Viguiera parishii* Shrubland Alliance)
- Cheesebush Scrub (*Ambrosia salsola* Shrubland Alliance)
- Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance)
- Joshua tree woodland (*Yucca brevifolia* Woodland Alliance)
- Rubber Rabbitbrush Scrub (*Ericameria nauseosa* Shrubland Alliance)

Land Cover Types

- Disturbed
- Developed

Sources: ESRI, San Bernardino County (2023)

Location: N:\2024\2024-165 Earl Graham Container Storage Project\MAPS\Vegetation_and_LandCover\EGP Vegetation aprx - EGP_Vegetation_20240925 (trotellini - 5/22/2025)

Map Date: 5/22/2025

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Scale in Feet
0 325

Figure 4. Vegetation Communities and Land Cover Types

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4.2.2.1 California Buckwheat Scrub (Eriogonum fasciculatum – Viguiera parishii Shrubland Alliance)

This vegetation community is dominated by California buckwheat (*Eriogonum fasciculatum*) or Parish's goldeneye (*Bahiopsis parishii*) in the shrub canopy, or the two species are co-dominant and occur with other species such as white bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), creosote bush (*Larrea tridentata*), and Mexican bladdersage (*Scutellaria mexicana*). Parish's goldeneye has undergone recent taxonomic changes at the genus level and the species is now recognized as *Bahiopsis parishii*; however, the CNPS Manual of California Vegetation Online still recognizes the old name- *Viguiera parishii*. This community typically occurs in well-drained soils with an open to intermittent open shrub canopy and an open to intermittent herbaceous layer of seasonal annuals, in elevations ranging from 1,312 to 6,561 ft (400 to 2,000 meters; [m]) above msl (CNPS 2024b). California buckwheat is a diverse species with four recognized varieties that occur in various habitat types. As such, this species can be dominant across multiple vegetation communities. The *Eriogonum fasciculatum - Viguiera parishii* Shrubland Alliance is known to occur in desert transition zones along hills and mountains of California deserts (CNPS 2024b).

No Parish's goldeneye was observed on site at the time of vegetation mapping efforts; however, it is important to retain its scientific name when referring to the vegetation community (i.e., *Eriogonum fasciculatum - Viguiera parishii* Shrubland Alliance) to clarify the specific California buckwheat alliance that was observed.

California buckwheat scrub was observed in the eastern portion of the 500-ft survey buffer (Figure 4). Anthropogenic disturbances present in this community included OHV trails, dirt roads, trash, and nonnative plant species. Plant species observed in this community during the biological survey included California buckwheat, Nevada ephedra (*Ephedra nevadensis*), Mediterranean grass (*Schismus* sp.), yucca buckwheat (*Eriogonum plumatella*), white bursage, and silver cholla (*Cylindropuntia echinocarpa*).

4.2.2.2 Cheesebush Scrub (Ambrosia salsola Shrubland Alliance)

Cheesebush scrub is dominated by cheesebush in the shrub canopy or cheesebush is co-dominant with other native species such as sweetbush (*Bebbia juncea*), wooly brickelbush (*Brickellia incana*), brittle bush (*Encelia farinosa*), Mexican bladdersage, and creosote bush. This community is often found in alluvial, sandy and gravelly soils of intermittently flooded channels, arroyos, washes, valleys, and flats, in elevations ranging from 0 to 5,249 ft (0 to 1,600 m) above msl (CNPS 2024b). This vegetation community was observed in the southeast portion of the 500-ft survey buffer (Figure 4). Anthropogenic disturbances present in this community included OHV trails, dirt roads, trash, and nonnative plant species. Plant species identified in this community during the biological survey included cheesebush, Russian thistle (*Salsola tragus*), Mediterranean grass, and giant eriastrum (*Eriastrum densifolium* ssp. *elongatum*).

4.2.2.3 Creosote Bush Scrub (Larrea tridentata Shrubland Alliance)

Creosote bush scrub is dominated by creosote bush in the shrub canopy or creosote bush is co-dominant with other native species such as rayless goldenhead (*Acamptopappus sphaerocephalus*), white bursage, cheesebush, allscale (*Atriplex polycarpa*), and Nevada ephedra. This vegetation community typically occurs in well-drained soils with an intermittent to open shrub canopy and a variable herbaceous layer of

seasonal annuals or perennial grasses, in elevations ranging from -246 to 4,265 ft (-75 to 1,300 m) above msl (CNPS 2024b). This vegetation community was observed in the northeast portion of the Study Area (Figure 4). Anthropogenic disturbances present in this community included OHV trails, dirt roads, trash, nonnative plant species, and scat from nonnative burros. Plant species identified in this community during the biological survey included creosote bush, hole in the sand plant (*Nicolletia occidentalis*), chia sage (*Salvia columbariae*), and Mediterranean grass.

4.2.2.4 Joshua Tree Woodland (Yucca brevifolia Shrubland Alliance)

This vegetation community is characterized by an even distribution of western Joshua tree comprising at least one percent of the total tree/tall shrub cover with other native species including creosote bush, big sagebrush (*Artemisia tridentata*), blackbrush (*Coleogyne ramosissima*), white bursage, matchweed (*Gutierrezia* spp.), and Anderson's boxthorn (*Lycium andersonii*) mixed in. Other trees such as California juniper (*Juniperus californicus*) and singleleaf pinyon pine (*Pinus monophylla*) may be present at low cover but may not meet or exceed one percent of the absolute cover in the tree canopy. This community typically occurs at elevations between 2,460 to 5,905 ft (750 to 1,800 m) above msl in soils that are often bimodal, with coarse sands and fine silts (CNPS 2024b). Joshua tree woodland is listed as a sensitive natural community by CDFW with a state rank of S3, indicating it is vulnerable in the state due to a restricted range, few populations, recent and widespread declines, or other factors making it vulnerable to extirpation in California (CDFW 2024e). While this community has a ranking of S3, Joshua tree woodland is considered to be highly imperiled due to the species' restricted range and significant population decline resulting from recent and widespread encroaching development within its limited range. This vegetation community was observed in the northeast corner of the Study Area and in the southern portion of the Survey Area with a small sliver present in the Study Area (Figure 4). Anthropogenic disturbances present in this community included OHV trails, trash, nonnative plant species, and scat from nonnative burros. Plant species identified in this community during the biological survey included western Joshua tree, creosote bush, Mediterranean grass, rubber rabbitbrush (*Ericameria nauseosa*), and silver cholla.

4.2.2.5 Rubber Rabbitbrush Scrub (Ericameria nauseosa Shrubland Alliance)

This vegetation community is dominated by rubber rabbitbrush in the shrub canopy and occurs with other species such as green rabbitbrush (*Chrysothamnus viscidiflorus*), species of ephedra (*Ephedra* spp.), scale broom (*Lepidospartum squamatum*), and California buckwheat. This community typically occurs in disturbed areas in well-drained, sandy/gravelly soils with an open to continuous canopy and a sparse or grassy herbaceous layer, in elevations ranging from 0 to 10,498 ft (0 to 3,200 m) above msl (CNPS 2024b). This vegetation community was observed intermittently throughout the Survey Area, in the 500-ft survey buffer (Figure 4). Anthropogenic disturbances present in this community included OHV trails, dirt roads, trash, nonnative plant species, nonnative burros and their scat, and evidence of soil disturbance (e.g., tilling, mowing). Plant species identified in this community during the biological survey included rubber rabbitbrush, Mediterranean grass, Russian thistle, and cheesebush.

4.2.2.6 Developed

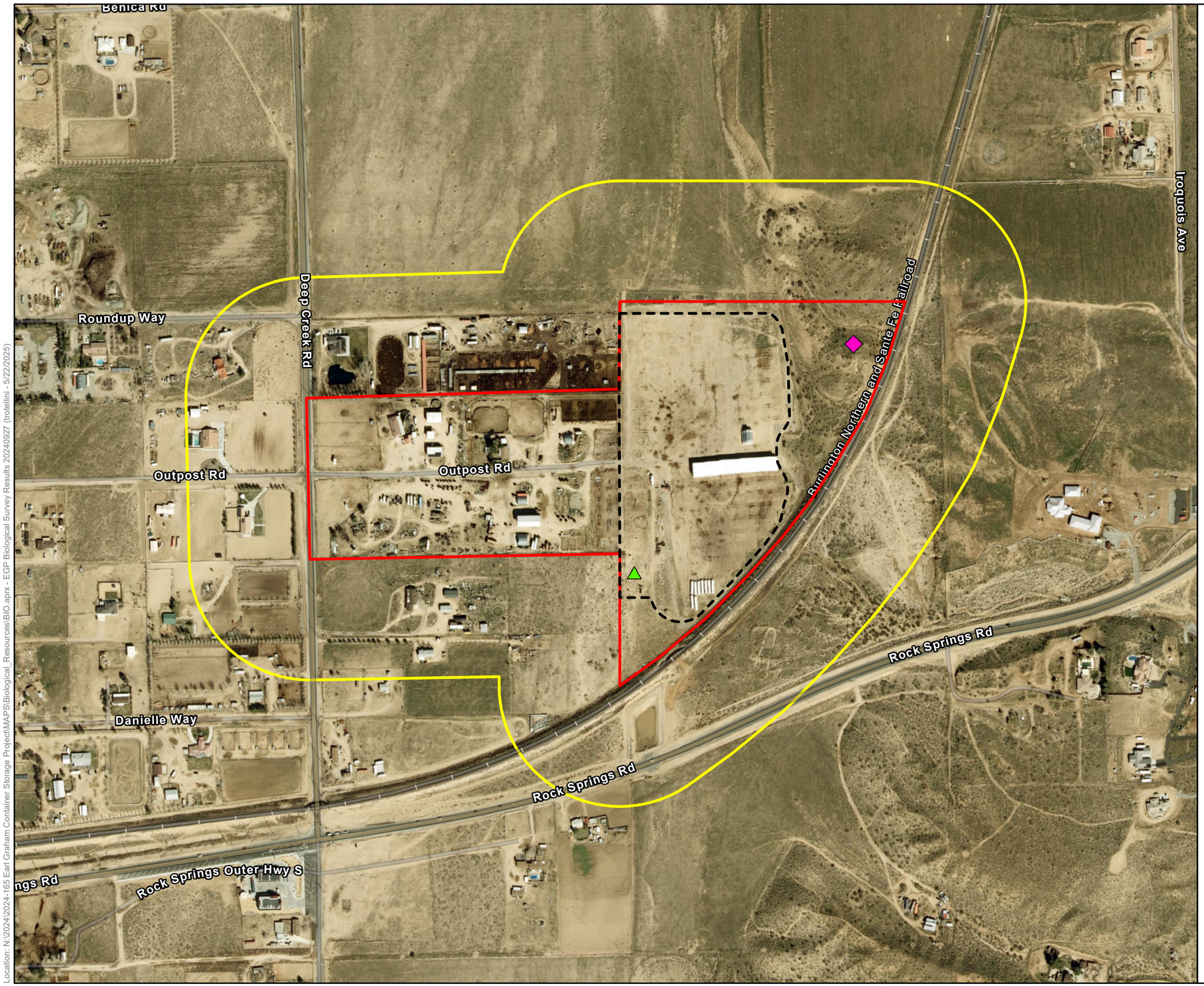
Developed is not a vegetation community but rather a land cover type. Developed lands are those that are heavily affected by human use, including landscaping, residential homes, commercial or industrial buildings and associated infrastructure, and transportation corridors. Within developed areas, naturalized vegetation is often relatively sparse, and largely consists of ornamental, nonnative species. This land cover type was observed in the Study Area, with the majority of development in the western portion (Figure 4). Areas mapped as developed included residential buildings, infrastructure to support livestock, paved roads, the BNSF railroad, and a fenced detention basin. Plant species identified in this land cover type included Russian thistle, Fremont cottonwood (Populus fremontii), Aleppo pine (*Pinus halepensis*) and Bermuda grass (*Cynodon dactylon*).

4.2.2.7 Disturbed

Disturbed land includes areas where the native vegetation community has been heavily influenced by human actions, such as grading, trash dumping, equipment staging, and off-highway vehicle use, but lack development. Disturbed land is not a vegetation classification, but rather a land cover type and is not restricted by elevation. Disturbed areas may be actively maintained to be free of vegetation or have been compacted or disked to such a degree that native and nonnative vegetation is very sparse. This land cover type was observed in a large portion of the Study Area, including the entire Project Area, and in a small patch outside of the Study Area, in the 500-ft survey buffer (Figure 4). Areas mapped as disturbed were largely devoid of vegetation but contained sparse nonnative ruderal species. Within the Study Area, disturbances in this land cover type included compacted soils, OHV tracks, nonnative plant species, storage of shipping containers and debris piles, trash, and dilapidated structures. A small portion of the southwest corner of the disturbed land cover type in the Study Area had sandy soils that supported a variety of native species. Plant species observed in this land cover type included Russian thistle, red stemmed filaree (*Erodium cicutarium*), flix weed (*Descurainia sophia*), western tansy mustard (*Descurainia pinnata*), annual bursage (*Ambrosia acanthicarpa*), jimsonweed (*Datura wrightii*), and western Mojave buckwheat (*Eriogonum mohavense*). One special-status plant species, Mojave monardella (*Monardella* cf. *exilis*), was incidentally observed in this land covert type during the biological survey. Mojave monardella is a CNPS California Rare Plant Rank (CRPR) 4.2 species. Additional detail on the species and the CRPR definitions are provided in the following sections.

4.2.3 Plants

Plant species observed on the Study Area were typical of the desert vegetation communities and disturbed areas present on the Study Area for the time of the year in which the survey was conducted. Two special status plant species, Mojave monardella (CRPR 4.2) and Joshua tree (CDFW Candidate), were incidentally observed within the Study Area. The location of the Mojave monardella is within the Project Area as shown on Figure 5. Western Joshua trees on the Study Area were present in the Joshua tree woodland with some sparse trees present in the creosote bush scrub. However, a western Joshua inventory was not conducted as a part of the biological survey, and the exact locations of western Joshua tree were not mapped.



Map Contents

- Study Area (47.10 Acres)
- Project Area (17.89 Acres)
- 500-foot Survey Buffer

Biological Reconnaissance Survey

- Mojave monardella *(Monardella cf. exilis*; CRPR 4.2)
- Loggerhead shrike *(Lanius ludovicianus excubitorides)*

Sources: ESRI, County of San Bernardino (2023)
Other Related Info if Needed

Location: N:\2024\2024-165 Earl Graham Container Storage Project\MAPS\Biological_Resources\BIO.aprx - EGP Biological Survey Results 20240927 (trotellini - 5/22/2025)

Map Date: 5/22/2025

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Scale in Feet
0 450

Figure 5. Biological Survey Results

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Native species that were most prevalent in the Study Area included creosote bush, western Joshua tree, rubber rabbitbrush, and silver cholla. Nonnative species observed within on the Study Area included black mustard (*Brassica nigra*), cheatgrass (*Bromus tectorum*), flix weed, redstem filaree (*Erodium cicutarium*), Russian thistle, horse nettle (*Solanum elaeagnifolium*) and Mediterranean grass. A full list of plant species observed within and immediately adjacent to the Study Area is included in Appendix B.

4.2.4 Wildlife

Wildlife species observed and detected within on the Study Area were characteristic of desert habitats and rural residential development in the region. Numerous wildlife species were observed or detected during the biological reconnaissance survey including honey bee (*Apis mellifera*), zebra-tailed lizard (*Callisaurus draconoides*), cactus wren (*Campylorhynchus brunneicapillus*), rock pigeon (*Columba livia*), common raven (*Corvus corax*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), feral burros, California ground squirrel (*Otospermophilus beecheyi*), and desert cottontail rabbit (*Sylvilagus audubonii*). One special-status wildlife species, loggerhead shrike (*Lanius ludovicianus*; CDFW SSC) was observed within the Study Area during the survey (Figure 5). The loggerhead shrike (*Lanius ludovicianus*) was observed calling throughout the Study Area in the Joshua tree woodland vegetation community. The majority of the Study Area represents relatively low-quality habitat for most wildlife species due to the level of human activity, existing development, and the disturbed land that covers most of the Study Area.

A complete list of wildlife species observed within or immediately adjacent to the Study Area is included in Appendix C.

4.2.5 Potential for Special-Status Plant and Wildlife Species to Occur in the Study Area

The literature review and database searches identified 58 special-status plant species and 48 special-status wildlife species that occur within or near the Study Area. However, due to the level of human disturbance at the Study Area and the current lack of suitable habitat for the special-status plant and wildlife species, many of the species are presumed absent from the Study Area. Analyses of potential for occurrence for special-status plant and wildlife species are presented in Appendices D and E, respectively.

4.2.5.1 Special-Status Plants

There were 58 special-status plant species that appeared in the literature review and database searches for the Study Area (CDFW 2024b; CNPS 2024a). A list was generated from the results of the literature review, and the Project was evaluated for suitable habitat that could support any of the special-status plant species on the list. Descriptions of the CNPS CRPR designations are found in Table 3 below. Of the 58 special-status plants identified, 1 species was found to have a high potential to occur, five species have a moderate potential to occur, 12 species have a low potential to occur, and the remaining 38 species identified in the literature review are presumed absent from the Study Area.

Table 3. California Rare Plant Rank Designations	
List Designation	**Meaning**
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which more information is needed; a review list
4	Plants of limited distribution; a watch list
List 1B, 2, and 4 extension meanings:	
.1	Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
.2	Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

For the purposes of this study, the results of the literature review were limited to plant species occurring within a nine-quadrangle search of the Study Area. With various habitat types occurring within the nine-quadrangle search, several species appeared in the literature review results that were presumed absent from the Study Area due to lack of suitable habitat, including soil conditions and elevation requirements. Additionally, for the purposes of this study, plant species with a CNPS CRPR of 1A were eliminated from the analysis because they are presumed to be extirpated from California.

4.2.5.2 Plant Species Present within the Study Area

The following special-status plant species were present within and in the vicinity of the Study Area.

Mojave Monardella

Mojave monardella is an annual herb in the Lamiaceae family that blooms from April to September. This species generally occurs in sandy soils of chenopod scrub, desert dunes, Great Basin scrub, Joshua tree woodland, lower montane coniferous scrub, Mojavean desert scrub, and pinyon and juniper woodland in elevations ranging from 1,970 to 6,725 ft (600 – 2,050 m) above msl (CNPS 2024a). Mojave monardella has a CRPR of 4.2, 4 meaning that the species' distribution is limited and is considered a watch list species, and the 0.2 threat level defined as "moderately threatened in California". Mojave monardella is neither listed under the federal or state ESAs. Threats to this species include urbanization, habitat loss, energy development, grazing, and vehicles. Suitable habitat for this species is present in the northeast and southwest corners of the Study Area in the Joshua tree woodland (Figure 4). One individual of Mojave monardella was observed in disturbed area of the Project Area during the biological survey (Figure 5).

Western Joshua Tree

Western Joshua tree is an evergreen tree-like monocot in the Agavaceae family that is known to bloom from March through June, with fruits typically forming and maturing between June and August. This species is generally found within an elevational range of approximately 1,310 to 10,500 ft (400 to 2,300 m) above msl and occurs primarily in scattered populations on flats and slopes throughout the Mojave Desert, with a small portion extending into the Great Basin Desert (Jepson 2024; Lenz 2007; Lenz 2001; CDFW 2020; USFWS 2018). Climate characteristics in the range of western Joshua tree follow a Mediterranean climate with long, hot summers and mild winters. This species generally occurs in chaparral, Joshua tree woodland, Mojavean desert scrub, pinon and juniper woodland, and other desert scrub habitats with fast draining, coarse grained alluvial soil (CNPS 2024a). Western Joshua tree is a Candidate for listing under the California ESA and is a proposed Covered Species under the draft Apple Valley MSHCP. This species is regulated under the CDNPA and under the *Town of Apple Valley Development Code – Plant Protection and Management (Chapter 9.76*) (Town of Apple Valley 2024). Lastly, western Joshua trees are protected in California under the Western Joshua Tree Conservation Act. Many western Joshua trees were identified within the Joshua tree woodland on the Study Area during the biological reconnaissance survey (Figure 4). However, a western Joshua tree census was not conducted. No Joshua trees were observed within the Project Area.

4.2.5.3 Plant Species with a High Potential to Occur

The following species has a high potential to occur on the Study Area because habitat for the species occurs onsite and a known occurrence has been recently recorded (within the last 20 years) in the database, within 5 miles of the site.

Crowned Muilla

Crowned muilla (*Muilla coronata*) is a perennial bulbiferous herb in the Themidaceae family that blooms from March to April, sometimes May. This species generally occurs in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland in elevations ranging from 2,200 to 6,430 ft (670 to 1,960 m) above msl (CNPS 2024a). Crowned muilla has a CRPR of 4.2, 4 meaning that the species' distribution is limited and is considered a watch list species, and the 0.2 threat level defined as "moderately threatened in California" (CNPS 2024c). Crowned muilla is not listed under the federal or state ESAs. Threats to this species include development, road widening, illegal dumping, and vehicles (CNPS 2024a). Suitable habitat for this species is present in the northeast and southwest corners of the Study Area in the Joshua tree woodland (Figure 4). No individuals of crowned muilla were observed in the Study Area during the biological reconnaissance survey, which was conducted outside of the bloom period for this species.

4.2.5.4 Plant Species with a Moderate Potential to Occur

The following species have a moderate potential to occur on the Study Area because either habitat for the species occurs onsite and a known occurrence has been reported in the database, but not within 5 miles of the site; a historic documented observation was recorded within 5 miles of the Study Area; or a known

recently documented occurrence has been reported within 5 miles of the site and marginal or limited amounts of habitat occurs onsite.

White Pygmy Poppy

White pygmy poppy (*Canbya candida*) is an annual herb in the Papaveraceae family that blooms from March to June. This species generally occurs in granitic, gravelly, or sandy soils of Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland in elevations ranging from 1,970 to 4,790 ft (600 to 1,460 m) above msl (CNPS 2024a). White pygmy poppy has a CRPR of 4.2, 4 meaning that the species' distribution is limited and is considered a watch list species, and the 0.2 threat level defined as "moderately threatened in California" (CNPS 2024c). White pygmy poppy is neither listed under the federal or state ESAs. Threats to this species include development, road maintenance, mining, nonnative plants, grazing, and vehicles (CNPS 2024a). Suitable habitat for this species is present in the northeast and southwest corners of the Study Area in the Joshua tree woodland (Figure 4). No individuals of white pygmy poppy were observed in the Study Area during the biological reconnaissance survey, which was conducted outside of the bloom period for this species.

Mojave Paintbrush

Mojave paintbrush (*Castilleja plagiotoma*) is a hemiparasitic perennial herb in the Orobanchaceae family that blooms from April to June. This species generally occurs in Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland, and in alluvial soils of Great Basin scrub in elevations ranging from 985 to 8,205 ft (300 to 2,500 m) above msl (CNPS 2024a). Mojave paintbrush has a CRPR of 4.3, 4 meaning that the species' distribution is limited and is considered a watch list species, and the 0.3 threat level defined as "not very threatened in California" (CNPS 2024c). Mojave paintbrush is neither listed under the federal or state ESAs. Threats to this species include road maintenance, recreational activities, energy development, and vehicles (CNPS 2024a). Suitable habitat for this species is present in the northeast corner of the Study Area in the Joshua tree woodland (Figure 4). No individuals of Mojave paintbrush were observed in the Study Area during the biological reconnaissance survey, which was conducted outside of the bloom period for this species.

Short-Joint Beavertail

Short-jointed beaver tail (*Opuntia basilaris* var. *brachyclada*) is a perennial stem succulent in the Cactaceae family that blooms from April to June, sometimes August. This species generally occurs in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland in elevations ranging from 1,395 to 5,905 ft (425 – 1,800 m) above msl (CNPS 2024a). Short-jointed beaver tail has a CRPR of 1B.2, 1B meaning that the species' distribution is "rare, threatened, or endangered in California and elsewhere", and the 0.2 threat level defined as "moderately threatened in California" (CNPS 2024c). Short-jointed beaver tail is neither listed under the federal or state ESAs. Threats to this species include urbanization, mining, horticultural collecting, grazing, and vehicles (CNPS 2024a). Suitable habitat for this species is present in the northeast corner of the Study Area in the Joshua tree woodland (Figure 4). No individuals of short-joint beavertail were observed in the Study Area during the biological reconnaissance survey, which was conducted outside of the bloom period for this species.

Beaver Dam Breadroot

Beaver Dam breadroot (*Pediomelum castoreum*) is a perennial herb in the Fabaceae family that blooms from April to May. This species generally occurs in sandy soils of Joshua tree woodland and Mojavean desert scrub, often along roadsides or in washes in elevations, in elevations ranging from 2,000 to 5,005 ft (610 to 1,525 m) above msl (CNPS 2024a). Beaver Dam breadroot has a CRPR of 1B.2, 1B meaning that the species' distribution is "rare, threatened, or endangered in California and elsewhere", and the 0.2 threat level defined as "moderately threatened in California" (CNPS 2024c). Beaver Dam breadroot is neither listed under the federal or state ESAs. Threats to this species include road widening and vehicles (CNPS 2024a). Suitable habitat for this species is present in the northeast and southwest corners of the Study Area in the Joshua tree woodland (Figure 4). No individuals of Beaver Dam breadroot were observed in the Study Area during the biological reconnaissance survey, which was conducted outside of the bloom period for this species.

Lemmon's Syntrichopappus

Lemmon's syntrichopappus (*Syntrichopappus lemmonii*) is an annual herb in the Asteraceae family that blooms from April to May, sometimes June. This species generally occurs in chaparral, Joshua tree woodland, and pinyon and juniper woodland, sometimes in gravelly or sandy soils, in elevations ranging from 1,640 to 6,005 ft (500 to 1,830 m) above msl (CNPS 2024a). Lemmon's syntrichopappus has a CRPR of 4.3, 4 meaning that the species' distribution is limited and is considered a watch list species, and the 0.3 threat level defined as "not very threatened in California" (CNPS 2024c). This species is neither listed under the federal or state ESAs. Threats to this species include nonnative plants, energy development, and vehicles (CNPS 2024a). Suitable habitat for this species is present in the northeast and southwest corners of the Study Area in the Joshua tree woodland (Figure 4). No individuals of Lemmon's syntrichopappus were observed in the Study Area during the biological reconnaissance survey, which was conducted outside of the bloom period for this species.

4.2.5.5 Plant Species with a Low Potential to Occur

The following species have a low potential to occur on the Study Area because limited or marginal habitat for these species occurs within the disturbed creosote bush scrub vegetation on the Study Area and a recently documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Study Area; or suitable habitat strongly associated with the species occurs onsite, but no records or only historic records were found within the database search.

- Parish's onion (*Allium parishii*), CRPR 4.3
- Mojave spineflower (*Chorizanthe spinosa*), CRPR 4.2;
- White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), CRPR 1B.2
- Clokey's cryptantha (*Cryptantha clokeyi*), CRPR 1B.2
- Desert cymopterus (*Cymopterus deserticola*), CRPR 1B.2, Proposed Covered

- Purple-nerve cymopterus (*Cymopterus multinervatus*), CRPR 2B.2
- Mojave monkeyflower (*Diplacus mohavensis*), CRPR 1B.2, Proposed Covered
- Booth's evening-primrose (*Eremothera boothii* ssp. *boothii*), CRPR 2B.3, Proposed Covered;
- Torrey's box-thorn (*Lycium torreyi*), CRPR 4.2;
- Mojave beardtongue (*Penstemon clevelandii* var. *mohavensis*), CRPR 1B.2
- Latimer's woodland-gilia (*Saltugilia latimeri*), CRPR 1B.2, Proposed Covered; and
- Mojave fish-hook cactus (*Sclerocactus polyancistrus*), CRPR 4.2.

4.2.5.6 Plant Species Presumed Absent

The following species were presumed absent from the Study Area due to the lack of suitable habitat (including elevation and soils) on the Study Area or because the Project is located outside of the known range for the species:

- Cushenbury oxytheca (*Acanthoscyphus parishii* var. *goodmaniana*), CRPR 1B.1, Federally Endangered, Proposed Covered
- Mt. Pinos Onion (*Allium howellii* var. *clokeyi*), CRPR 1B.3
- California androsace (*Androsace elongata* ssp. *acuta*), CRPR 4.2
- Big Bear Valley milk-vetch (*Astragalus lentiginosus* var. *sierrae*), CRPR 1B.2
- Big Bear Valley woollypod (*Astragalus leucolobus*), CRPR 1B.2
- Pinyon rockcress (*Boechera dispar*), CRPR 2B.3, Proposed Covered
- Parish's rockcress (*Boechera parishii*), CRPR 1B.2
- Shockley's rockcress (*Boechera shockleyi*), CRPR 2B.2, Proposed Covered
- Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*), CRPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*), CRPR 4.2
- San Bernardino Mountains owl-clover (*Castilleja lasiorhyncha*), CRPR 1B.2
- Mojave tarplant (*Deinandra mohavensis*), CRPR 1B.3, Proposed Covered
- Johnston's monkeyflower (*Diplacus johnstonii*), CRPR 4.3;
- San Bernardino Mountains dudleya (*Dudleya abramsii* ssp. *affinis*), CRPR 1B.2, Proposed Covered
- Big Bear Valley sandwort (*Eremogone ursina*), CRPR 1B.2, Federally Threatened
- Parish's daisy (*Erigeron parishii*), CRPR 1B.1, Federally Threatened

- Cushenbury buckwheat (*Eriogonum ovalifolium* var. *vineum*), CRPR 1B.1, Federally Endangered, Proposed Covered
- Little purple monkeyflower (*Erythranthe purpurea*), CRPR 1B.2
- Hot springs fimbristylis (*Fimbristylis thermalis*), CRPR 2B.2
- Parish's alumroot (*Heuchera parishii*), CRPR 1B.3
- Silver-haired ivesia (*Ivesia argyrocoma* var. *argyrocoma*), CRPR 1B.2
- Southern California black walnut (*Juglans californica*), CRPR 4.2
- Ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*), CRPR 4.2
- Lemon lily (*Lilium parryi*), CRPR 1B.2
- Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), CRPR 2B.2;
- Parish's desert-thorn (*Lycium parishii*), CRPR 2B.3
- California muhly (*Muhlenbergia californica*), CRPR 4.3
- Baja navarretia (*Navarretia peninsularis*), CRPR 1B.2
- Slender nemacladus (*Nemacladus gracilis*), CRPR 4.3
- San Bernardino ragwort (*Packera bernardina*), CRPR 1B.2
- Golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*), CRPR 4.2
- Parish's yampah (*Perideridia parishii* ssp. *parishii*), CRPR 2B.2
- Big Bear Valley phlox (*Phlox dolichantha*), CRPR 1B.2
- Parish's rupertia (*Rupertia rigida*), CRPR 4.3
- Southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*), CRPR 1B.2, Proposed Covered;
- Parish's checkerbloom (*Sidalcea hickmanii* ssp. *parishii*), CRPR 1B.2, State Rare
- Laguna Mountains jewel-flower (*Streptanthus bernardinus*), CRPR 4.3; and
- San Bernardino aster (*Symphyotrichum defoliatum*), CNPS 1B.2.

4.2.5.7 Special-Status Wildlife

Of the 48 special-status wildlife species identified in the literature review, one as found to have a high potential to occur, two were found to have a moderate potential to occur, and seven were found to have a low potential to occur on the Study Area. The remaining 35 species are presumed absent from the Study Area.

4.2.5.8 Wildlife Species Present within the Study Area

Loggerhead Shrike (*Lanius ludovicianus*)

Loggerhead shrike is a CDFW SSC and is a proposed Covered Species under the draft Apple Valley MSHCP (Town of Apple Valley 2023, 2017). This species typically occurs in broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinon & juniper woodlands, riparian woodland, and Sonoran desert scrub habitats and prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. Joshua tree woodland was observed within the Study Area and provides suitable habitat for Loggerhead shrike. Additionally the Joshua tree woodland vegetation community provides suitable perches for scanning. This species was incidentally observed during the biological reconnaissance survey on September 10, 2024 within the Study Area, but not within the Project Area (Figure 5).

4.2.5.9 Wildlife Species with a High Potential to Occur

Burrowing owl (*Athene cunicularia*)

Burrowing owl is a CDFW SSC and a proposed Covered Species under the draft Apple Valley MSHCP (Town of Apple Valley 2023, 2017). The burrowing owl is found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Burrowing owls make use of mammal burrows and can also be found nesting in burrows made under concrete or other anthropogenic features and are often found near human activity.

Suitable open, desert scrub habitat was present within the disturbed creosote bush scrub, rubber rabbitbrush scrub, Joshua tree woodland, cheesebush scrub and California buckwheat scrub vegetation within the Survey Area. Additionally, the species is mobile and can fly over the Study Area at any time. The literature review identified eight occurrences of burrowing owls within 5 miles of the Study Area between 2006 and 2007 (CDFW 2024b). Due to the suitable habitat and multiple recent occurrences within 5 miles of the Study Area, burrowing owls have a high potential to occur on the Study Area.

4.2.5.10 Wildlife Species with a Moderate Potential to Occur

The following species have a moderate potential to occur on the Study Area because either habitat for the species occurs onsite and a known occurrence has been reported in the database, but not within 5 miles of the site; a historic documented observation was recorded within 5 miles of the Study Area; or a known recently documented occurrence has been reported within 5 miles of the site and marginal or limited amounts of habitat occurs onsite.

Crotch Bumble Bee (*Bombus crotchii*)

The Crotch bumble bee was petitioned for listing under the California ESA in October 2018, advanced to candidacy in June 2019, was challenged in courts and the candidacy was temporarily stayed beginning in February 2021, and candidacy was recently reinstated in September 2022 (CDFW 2023). This species is associated with open grassland and scrub habitats and occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of

southwestern California (Williams et al. 2014). Crotch bumble bees primarily nest underground, and may occupy cavities in a variety of substrates including: thatched grasses, abandoned rodent burrows or bird nests, brush piles, rock piles, and fallen logs (Alford 1975; Free and Butler 1959; Fussell and Corbet 1992; Lye et al. 2012; Sladen 1912; Williams et al. 2014) and have also been found nesting in manmade structures such as walls, rubble, or abandoned furniture (Fussell and Corbet 1992, Williams et al. 2014). Bumble bee nests are annual and conclude with deaths of the queen, workers, and drones at the end of the season with only the mated gyne (future queen) surviving the winter (overwintering) in order to emerge the following spring to start the next year's colony. Similar to other bumble bee species, Crotch bumble bee is a generalist forager and reportedly visits a variety of flowering plants, including *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia*.

Suitable foraging habitat is present within the Study Area in the form of flowering plants, specifically the various *Eriogonum* spp. within the Study Area. The literature review identified one historical occurrence (OCC #174; CDFW 2023a) in 1939 approximately four miles away.

Le Conte's thrasher (*Toxostoma lecontei*)

The Le Conte's thrasher is a CDFW SSC and is a proposed Covered Species under the draft Apple Valley MSHCP (Town of Apple Valley 2023, 2017). The species is a desert resident and is found in communities such as open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. It commonly nests in dense, spiny shrubs or densely branched cactus, usually 2 feet to 8 feet above ground. It primarily feeds on insects, including grasshoppers, ants, and beetles. This species was not observed during the biological survey.

Suitable open, desert scrub habitat was present within the disturbed creosote bush scrub, rubber rabbitbrush scrub, Joshua tree woodland, cheesebush scrub and California buckwheat scrub vegetation within the Survey Area. Additionally, Cooper's box thorn (*Lycium cooperi*) and silver cholla provide potential nesting habitat for Le Conte's thrasher. Three historic occurrences (OCC #17, 161, 162; CDFW 2024a) were documented within 5 miles of the Project but were over 50 years old.

4.2.5.11 Wildlife Species with a Low Potential to Occur

The following species have a low potential to occur on the Study Area because limited or marginal habitat for the species occurs within the site and a recently documented observation occurs within the database search, but not within 5 miles of the area; a historic documented observation (more than 20 years old) was recorded within 5 miles of the Study Area; or suitable habitat strongly associated with the species occurs onsite, but no records or only historic records were found within the database search.

- Pallid bat (*Antrozous pallidus*), CDFW SSC and Proposed Covered;
- Golden eagle (*Aquila chrysaetos*), CDFW Fully Protected and Proposed Covered;
- Townsend's big-eared bat (*Corynorhinus townsendii*), CDFW SSC and Proposed Covered;
- Desert tortoise (*Gopherus agassizii*), Federally Listed (Threatened), State Listed (Threatened) and Proposed Covered;

- Bald eagle (*Haliaeetus leucocephalus*), State Listed (Endangered);
- Summer tanager (*Piranga rubra*), CDFW SSC and Proposed Covered; and
- Bendire's thrasher (*Toxostoma bendirei*), CDFW SSC and Proposed Covered;

4.2.5.12 Wildlife Species Presumed Absent

The following species were presumed absent from the Study Area due to lack or suitable habitat and absence of species records in the vicinity of the Study Area:

- Cooper's hawk (*Accipiter cooperii*), State Watch List Species and Proposed Covered;
- Southwestern pond turtle (*Actinemys pallida*), Federally Listed (Candidate) and Proposed Covered;
- Tricolored blackbird (*Agelaius tricolor*), State Listed (Threatened) and CDFW SSC;
- Arroyo toad (*Anaxyrus californicus*), Federally Listed (Endangered), CDFW SSC and Proposed Covered;
- Southern California legless lizard (*Anniella stebbinsi*), CDFW SSC;
- Golden eagle (*Aquila chrysaetos*), CDFW Fully Protected and Proposed Covered;
- Long-eared owl (*Asio otus*), CDFW SSC and Proposed Covered;
- Swainson's hawk (*Buteo swainsoni*), State Listed (Threatened) and Proposed Covered;
- Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), CDFW SSC and Proposed Covered;
- Southern rubber boa *(Charina umbratical*), State Listed (Threatened);
- Northern harrier (nesting) (*Circus hudsonius*), Proposed Covered;
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), Federally Listed (Threatened), State Listed (Endangered) and Proposed Covered;
- Southwestern willow flycatcher (*Empidonax traillii extimus*), Federally Listed (Endangered), State Listed (Endangered) and Proposed Covered;
- Quino checkerspot butterfly (*Euphydryas editha quino*), CDFW SSC;
- Prairie falcon (*Falco mexicanus*), State Watch List Species and Proposed Covered;
- Arroyo chub (*Gila orcuttii*), CDFW SSC;
- San Bernardino flying squirrel (*Glaucomys oregonensis californicus*), CDFW SSC;
- Victorville shoulderband (*Helminthoglypta Mojavean*), Proposed Covered;
- Yellow-breasted chat (*Icteria virens*), CDFW SSC and Proposed Covered;
- Mohave River vole (*Microtus californicus mohavensis*), CDFW SSC and Proposed Covered;

- Brown-crested flycatcher (*Myiarchus tyrannulus*), Proposed Covered;
- Desert bighorn sheep (*Ovis canadensis nelson*), Proposed Covered;
- Coast horned lizard (*Phrynosoma blainvillii*), CDFW SSC and Proposed Covered;
- San Emigdio blue butterfly (*Plebulina emigdionis*), Proposed Covered;
- Vermilion flycatcher (nesting) (*Pyrocephalus rubinus*), CDFW SSC and Proposed Covered;
- California red-legged frog (*Rana draytonii*), Federally Listed (Threatened), CDFW SSC and Proposed Covered;
- Southern mountain yellow-legged frog (*Rana muscosa*), Federally Listed (Endangered), State Listed (Endangered);
- Yellow warbler (*Setophaga petechia*), CDFW SSC and Proposed Covered;
- Mohave tui chub (*Siphateles bicolor mohavensis*), Federally Listed (Endangered), State Listed (Endangered), CDFW Fully Protected and Proposed Covered;
- American badger (*Taxidea taxus*), CDFW SSC;
- Two-striped gartersnake (*Thamnophis hammondii*), CDFW SSC;
- Least Bell's vireo (*Vireo bellii pusillus*), Federally Listed (Endangered), State Listed (Endangered) and Proposed Covered;
- Gray vireo (*Vireo vicinior*), CDFW SSC; and
- Desert kit fox (*Vulpes macrotis arsipus*), CDFW SSC and Proposed Covered; and
- Mohave ground squirrel (*Xerospermophilus mohavensis*), State Listed (threatened).

4.2.6 Aquatic Resources Delineation

A formal Aquatic Resources Delineation was performed by ECORP under separate cover for the Project (ECORP 2025a). ECORP mapped a total of approximately 0.050 acre of aquatic resources within the Study Area. The aquatic feature present within the Study Area consists of one ephemeral drainage that is located within the northeastern portion of the Study Area, outside of the proposed Project Area. This feature conveys flows in a southeast-to-northwest direction. The aquatic feature present within the Study Area did not support wetland characteristics. Overall, the streambed was unvegetated. ECORP mapped a total of approximately 0.097 acre of potential CDFW jurisdiction within the Study Area consisting of streambed. The streambed was located outside of the proposed Project Area. No riparian vegetation was observed within the Study Area. Additional details and the specific location of the aquatic feature is provided in the Aquatic Resources Delineation report (ECORP 2025a).

4.2.7 Raptors and Migratory Birds

Suitable nesting habitat for numerous species of migratory birds protected under the federal MBTA and California Fish and Game Code is present on and adjacent to the Study Area in the existing structures,

shrubs, and Joshua trees. Suitable nesting habitat for ground nesting bird species, such as mourning doves, is also present on the Study Area. Therefore, nesting birds could use the Study Area during the nesting bird season (typically February 1 through August 31).

4.2.8 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor varies, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor usage and wildlife movement patterns vary greatly among species.

According CDFW Terrestrial Habitat Connectivity the Study Area is located within a conservation planning linkage which represents the best connections between core natural areas to maintain habitat connectivity (CDFW 2024f). The Study Area provides wildlife movement opportunities because the majority of the Study Area contains open and relatively unimpeded land. The Study Area is surrounded by open unimpeded desert land, except for housing developments to the west. The Study Area is exposed and does not contain any major features that would be considered critical movement corridors for wildlife. Although the dirt roads and ephemeral drainages located within the Study Area are likely utilized by wildlife moving through the area, these features would not be considered necessary linkages between conserved natural habitat areas or critical for wildlife movement because of the nearby open space surrounding the Study Area. Although the Study Area does not generally provide nursery site habitat, it does provide nesting habitat for birds protected under the MBTA as discussed in Section 4.2.7 above.

4.2.9 State and Local Regulations

4.2.9.1 California Desert Native Plants Act

Plant species protected by the CDNPA were identified on the Study Area, and included western Joshua tree, silver cholla, and Mojave yucca (*Yucca schidigera*). However, neither a western Joshua tree census nor an inventory of CDNPA species were conducted for the Project.

4.2.9.2 Town of Apple Valley Development Code – Plant Protection and Management (Chapter 9.76)

Plant species protected by the Town of Apple Valley Development Code were identified on the Study Area, and included western Joshua tree, silver cholla, and Mojave yucca (*Yucca schidigera*). No creosote rings, 10 feet or greater in diameter, were identified on the Study Area. However, neither a western Joshua

tree census nor an inventory of species protected under the Town of Apple Valley Development Code were conducted for the Project.

5.0 IMPACT ANALYSIS

5.1 Special-Status Species

The Study Area is generally classified as developed and disturbed with Joshua tree woodland and creosote bush scrub vegetation communities present in the northeast and southwest corners of the area. Outside of the developed area, disturbances observed on the Study Area were associated with vehicle use, storage of shipping containers and debris piles, dilapidated structures, and nonnative plant species. Two special-status plant species, Mojave monardella and western Joshua tree, were observed during the biological survey. Fifty-eight (58) special-status plant species were identified in the literature review and database searches to have occurred in the Project vicinity. One of these species, crowned muilla, was determined to have a high potential to occur based on habitat suitability and available records in the vicinity of the Study Area. Five species (white pygmy poppy, Mojave paintbrush, short-joint beavertail, Beaver Dam breadroot, and Lemmon's syntrichopappus) were determined to have a moderate potential to occur based on the available habitat and records in the vicinity of the Study Area. Twelve (12) species (Parish's onion, Mojave spineflower, white-bracted spineflower, Clokey's cryptantha, desert cymopterus, purple-nerve cymopterus, Mojave monkeyflower, Booth's evening-primrose, Torrey's box-thorn, Mojave beardtongue, Latimer's woodland-gilia, and Mojave fish-hook cactus) were determined to have low potential to occur based on the available habitat and records in the vicinity of the Study Area.

Based on communications with the Client, Project-related activities are expected to be limited to the 17.89-acre Project Area within the disturbed area of the Study Area (Figure 4). Though Mojave monardella was observed within the Project area and has a CRPR of 4.2, meaning that the species' distribution is limited and is considered a watch list species, and the 0.2 threat level defined as "moderately threatened in California," the species is neither listed under the federal or state ESAs and occurs within an area of regular ongoing disturbance from the same container storage activity that is proposed to continue. Additionally, the species is known to be well established in the western Mojave region (CNPS 2024a). Therefore, any impacts to Mojave monardella anticipated resulting from Project activities would be less than significant. However, if Project-related activities encroach into the natural habitat of the Joshua tree woodland present on the Study Area, then impacts to special-status plant species may occur and consultation with the appropriate regulatory agencies would be required.

Western Joshua tree was observed to be present on the Study Area during the biological reconnaissance survey conducted on September 10, 2024, and the Study Area provides suitable habitat for the species in the Joshua tree woodland vegetation community. Western Joshua tree is a CDFW Candidate species and is protected under the Western Joshua Tree Conservation Act. Project-related activities are expected to be limited to the disturbed habitat within the Project Area where western Joshua trees are not present. If impacts to western Joshua tree are expected, a protocol-level western Joshua tree census and coordination with CDFW on obtaining an Incidental Take Permit for western Joshua tree would be required.

- The literature review and database searches identified 48 special-status wildlife species that have occurred in the vicinity of the Study Area. One special-status wildlife species, loggerhead shrike, was observed during the biological survey. Based on the condition of the Study Area and the available habitat, one species (burrowing owl) was determined to have a high potential to occur, two species (Crotch bumble bee and Le Conte's thrasher) were determined to have a moderate potential to occur, and seven species (pallid bat, Golden eagle, Townsend's big-eared bat, desert tortoise, bald eagle, summer tanager and Bendire's thrasher) have a low potential to occur on the Study Area. However, the presence of species with a low potential to occur is likely precluded due to the lack of high-quality habitat.
- Burrowing owl was found to have a high potential to occur on the Study Area. Although no burrowing owl, burrowing owl sign (whitewash, pellets, and/or feathers) were observed during the survey, the Study Area does contain suitable habitat for this species and the literature review and database search identified eight records in the vicinity of the Study Area. Burrowing owls are CDFW SSC species that are also protected by the MBTA and California Fish and Game Code. Impacts resulting from direct take of burrowing owls, and/or their burrows shall be mitigated. These species are mobile and if the conditions were to change on the Study Area, they could take up residence on the Study Area. However, with Project-related activities expected to be limited to the Project Area within the disturbed area of the Study Area (Figure 4), no impacts to burrowing owl are anticipated resulting from Project activities.

Crotch bumble bee and LeConte's thrasher were found to have a moderate potential to occur on the Study Area. Although neither species was observed during the survey, the Study Area does contain suitable habitat for both species and the literature review and database search identified historic occurrences within 5 miles of the Study Area. Crotch bumble bee is a candidate for listing under the California ESA and LeConte's thrasher is a CDFW SSC that is protected by the MBTA and California Fish and Game Code. However, with Project-related activities expected to be limited to the Project Area within the disturbed area of the Study Area (Figure 4), no impacts to Crotch bumble bee and LeConte's thrasher are anticipated resulting from Project activities.

No desert tortoise or desert tortoise sign (e.g., scat, tracks, burrows) were identified during the biological reconnaissance survey. However, desert tortoises were assigned a low potential to occur on the Study Area based on the presence of marginally suitable habitat in the vicinity of the Study Area. Marginally suitable, low-quality habitat was present within the disturbed Joshua tree woodland and creosote bush scrub habitat on the Study Area. However, the site is fairly isolated, very disturbed, and bordered by a BNSF railroad and urban development. Therefore, desert tortoise is not anticipated to be present and no impacts are anticipated resulting from Project Activities.

Six additional species (pallid bat, golden eagle, Townsend's big-eared bat, bald eagle, summer tanager and Bendire's thrasher) were determined to have low potential to occur based on the available habitat and records in the vicinity of the Study Area.

The structures, shrubs, and Joshua trees present on and immediately adjacent to the Study Area could provide nesting habitat for nesting birds and raptors protected by the MBTA and California Fish and Game Code. Furthermore, the Study Area. The structures, shrubs, and Joshua trees present on and

immediately adjacent to the Study Area could provide nesting habitat for ground-nesting bird species. However, with Project-related activities expected to be limited to the Project Area within the disturbed area of the Study Area where no trees were observed (Figure 4), no impacts to nesting birds are anticipated resulting from Project activities. However, with Project-related activities expected to be limited to the Project Area within the disturbed area of the Study Area where no trees were observed (Figure 4), no impacts to nesting birds are anticipated resulting from Project activities.

5.2 Sensitive Natural Communities

Natural vegetation communities observed in the Study Area included 3.34 acres of creosote bush scrub and 1.79 acres of Joshua tree woodland. The Study Area did not contain any riparian habitat. Joshua tree woodland is listed as a sensitive natural community by CDFW with a state rank of S3, indicating it is vulnerable in the state due to a restricted range, few populations, recent and widespread declines, or other factors making it vulnerable to extirpation in California (CDFW 2024e). While this community has a ranking of S3, Joshua tree woodland is considered to be highly imperiled due to the species' restricted range and significant population decline resulting from recent and widespread encroaching development within its limited range. This community was observed in the northeast corner of the Study Area and in a small area of the southwest corner of the Study Area (Figure 4). Anthropogenic disturbances present in this community included OHV trails, trash, nonnative plant species, and scat from nonnative burros. Based on communications with the Project Proponent, Project-related activities are expected to be limited to the Project Area, within the disturbed area of the Study Area (Figure 4). Therefore, no impacts to Joshua tree woodland are anticipated resulting from Project activities. However, if Project-related activities encroach into the Joshua tree woodland present on the Study Area, then impacts to this sensitive natural community may occur and consultation with the appropriate regulatory agencies would be required.

5.3 State and Federally Protected Wetlands and Waters of the United States

ECORP mapped a total of approximately 0.050 acre of ephemeral drainage within the Study Area. The ephemeral drainage mapped within the Study Area likely does not meet the current definition of Waters of the U.S. but is subject to USACE verification. The ephemeral drainage would likely be jurisdictional under the Porter-Cologne Water Quality Control Act. In addition, approximately 0.097 acre of streambed occurs within the Study Area that would likely be regulated under California Fish and Game Code Section 1600. These acreages represent a calculated estimation of the extent of aquatic resources within the Study Area and are subject to modification following an agency review and/or verification process.

According plans provided by the Project Proponent, there are no anticipated Project impacts to aquatic features within the Study Area. The ephemeral drainage and associated streambed that were mapped within the Study Area occur outside of any areas that contain Project impacts. Therefore, Project development would not result in any permanent or temporary impacts to potential Waters of the U.S., Waters of the State, and/or CDFW-regulated habitat. Additional details are provided in the Potential Impact Analysis of Aquatic Resources and Permit Recommendation for the Container Storage Project Memorandum prepared by ECORP for this Project (ECORP 2025b).

5.4 Wildlife Corridors and Nursery Sites

The Study Area is located adjacent to areas containing existing disturbances (e.g., paved and dirt roads,), residential development to the west, and open land to the north. The Study Area contains little cover that would only allow for local movement of wildlife. No migratory wildlife corridors or native wildlife nursery sites were identified within the Study Area. Therefore, no impacts to wildlife corridors or nursery sites are expected to occur during the development of the Study Area.

5.5 Local Policies and Ordinances

5.5.1.1 California Desert Native Plants Act

Plant species protected by the CDNPA were identified on the Study Area, and included western Joshua tree, silver cholla, and Mojave yucca (*Yucca schidigera*). Based on communications with the Project Proponent, Project-related activities are expected to be limited to the Project Area within the disturbed area of the Study Area (Figure 4). Therefore, no impacts to CDNPA plant species are anticipated resulting from Project activities. However, if Project-related activities encroach into the Joshua tree woodland and creosote bush scrub present on the Study Area, then impacts to CDNPA plant species may occur and consultation with the appropriate regulatory agencies and/or municipalities would be required.

5.5.1.2 Town of Apple Valley Development Code – Plant Protection and Management (Chapter 9.76)

Plant species protected by the Town of Apple Valley Development Code were identified on the Study Area, and included western Joshua tree, silver cholla, and Mojave yucca (*Yucca schidigera*). Based on communications with the Project Proponent, Project-related activities are expected to be limited to the Project Area within the disturbed area of the Study Area (Figure 4). Therefore, no impacts to plant species protected by the Town of Apple Valley Development Code are anticipated resulting from Project activities. However, if Project-related activities encroach into the Joshua tree woodland and creosote bush scrub present on the Study Area, then impacts to protect plant species may occur and consultation with the appropriate regulatory agencies and/or municipalities would be required.

6.0 MITIGATION MEASURES

Though several sensitive natural resources were identified or have the potential to be present within the Study Area, none are anticipated to occur within the Project Area where all operational activities would take place outside of natural, undisturbed areas. Therefore, no mitigation measures are expected to be required. The following best management practices are not mitigation measures pursuant to CEQA but are recommended to avoid impacts to species that have potential to occur on the property:

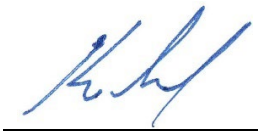
- Confine all operational activities to the Project Area.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from the Project Area.

- Use of rodenticides and herbicides on the Study Area should be restricted. This is necessary to prevent primary or secondary poisoning of wildlife, and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to predatory wildlife.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the Project applicant or the applicant's representative and that I have no financial interest in the Project.

SIGNED:



DATE: May 21, 2024

Kevin Israel
Staff Biologist
ECORP Consulting, Inc.

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LIST OF APPENDICES

Appendix A –Representative Study Area Photographs

Appendix B – Plant Species Observed

Appendix C – Wildlife Species Observed

Appendix D – Potential for Occurrence of Special-Status Plant Species

Appendix E – Potential for Occurrence of Special-Status Wildlife Species

APPENDIX A

Representative Study Area Photographs

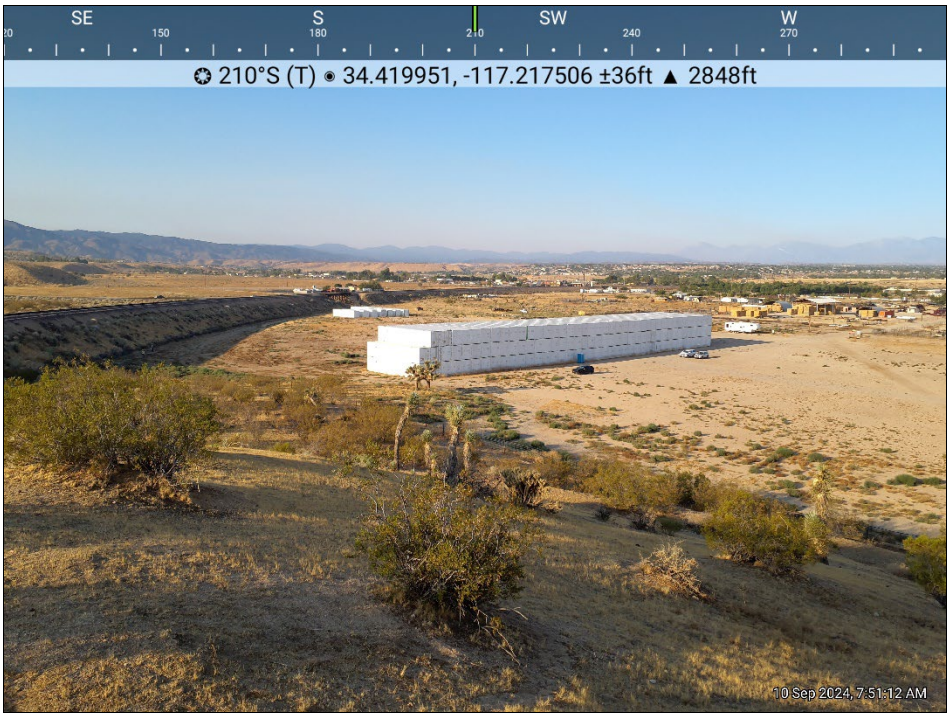

Photo 1. View of Creosote Bush Scrub and Disturbed Land Cover Present within the Eastern Half of the Study Area, facing southwest.

Photo 2. View of the Northern Portion of Study Area with Creosote Bush Scrub on the Hillside in the Foreground as well as Disturbed and Developed Lands in the Background, facing west.

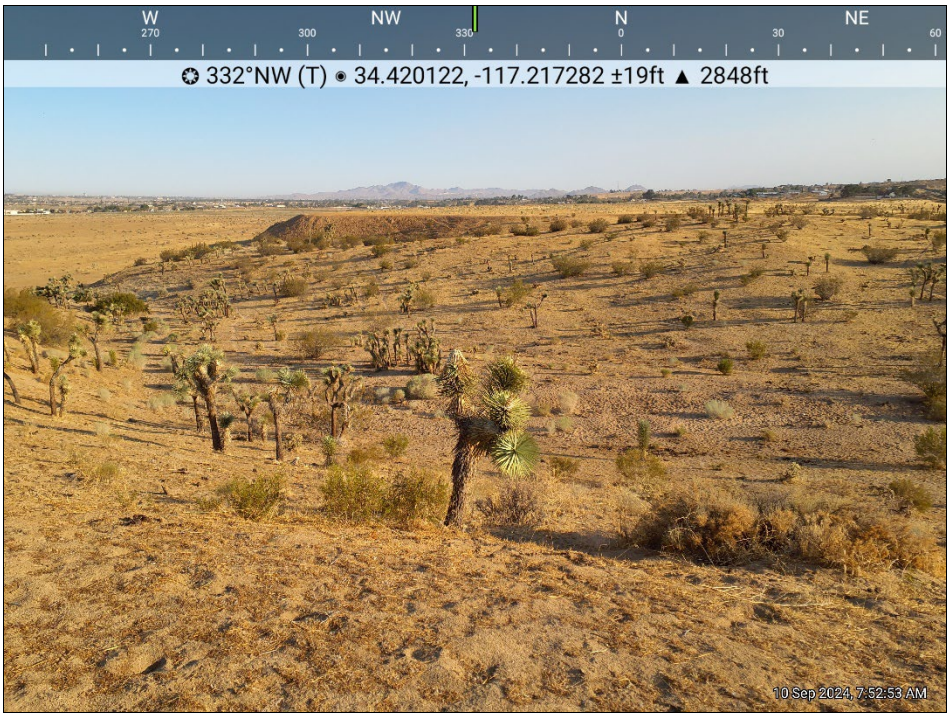

Photo 3. View of Joshua Tree Woodland Located in the Northeast Corner of the Study Area, facing northwest.

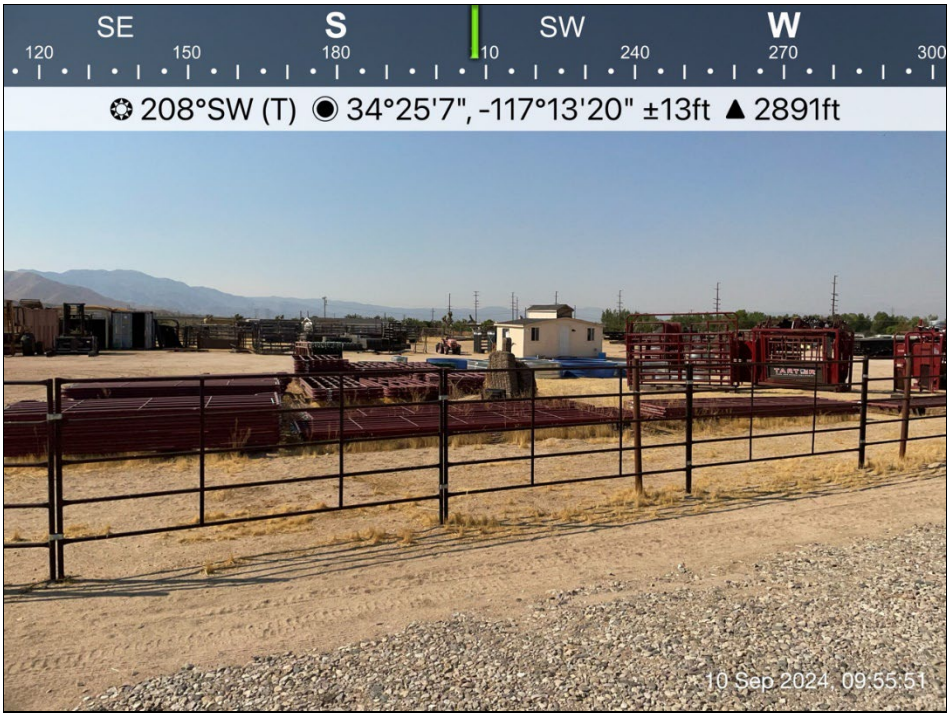

Photo 4. View of Existing Development Located in the Study Area South of Outpost Road, Facing south-southwest.

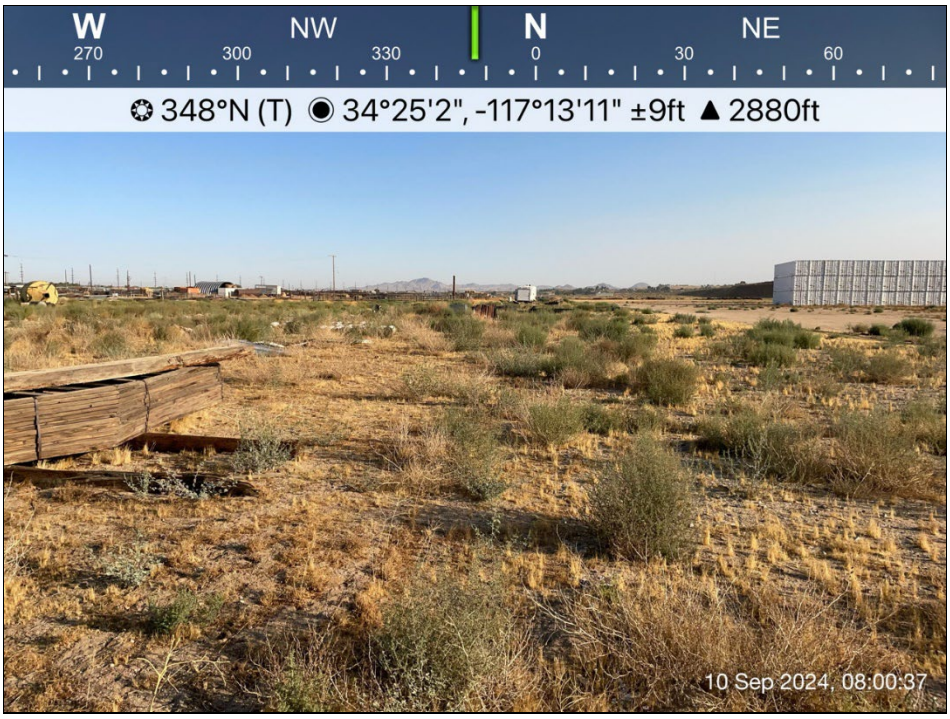

Photo 5. View of Southern Disturbed Portion of the Study Area Dominated by Nonnative Plant Species including Russian Thistle and Schismus, facing north-northwest.

Photo 6. View of Debris Piles in the Northern Disturbed Portion of the Study Area with California Ground Squirrel Burrows Present Underneath the Debris, facing southeast.

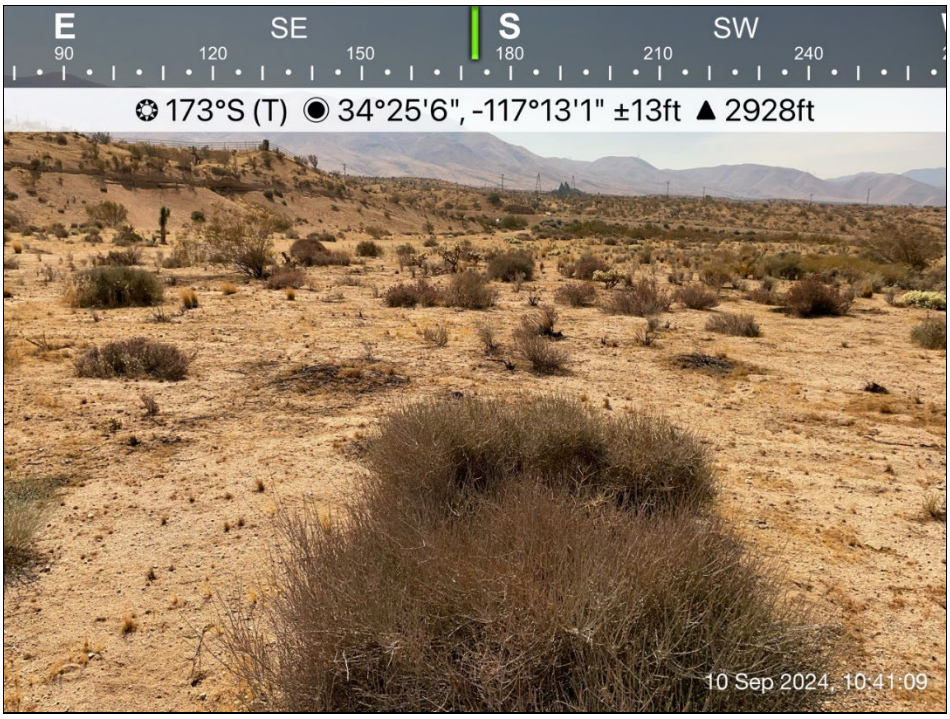

Photo 7. View of Disturbed California Buckwheat Scrub Located Southeast of the Study Area within the 500-Foot Survey Buffer, facing south.

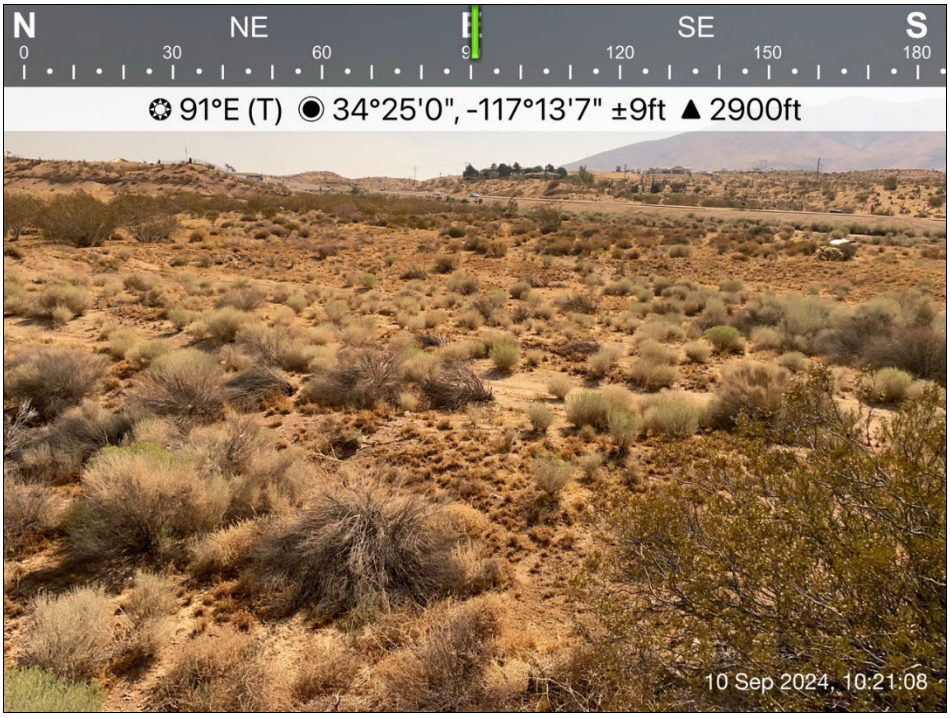

Photo 8. View of Disturbed Rubber Rabbitbrush Scrub Located Outside of the Study Area Within the 500-Foot Survey Buffer, facing east.

APPENDIX B

Plant Species Observed

SCIENTIFIC NAME	COMMON NAME
ANGIOSPERMS (DICOTYLEDONS)	
AMARANTHACEAE	**PIGWEED FAMILY**
Atriplex canescens	Fourwing saltbush
ASTERACEAE	**SUNFLOWER FAMILY**
Acamptopappus sphaerocephalus var. *sphaerocephalus*	Rayless goldenhead
Ambrosia acanthicarpa	Annual bursage
Ambrosia salsola	Cheesebush
Encelia actoni	Acton's brittlebush
Ericameria linearifolia	Interior goldenbush
Ericameria nauseosa	Rubber rabbitbrush
Gutierrezia sp.	Matchweed
Lessingia glandulifera var. *glandulifera*	Sticky lessingia
Nicolletia occidentalis	Hole in the sand plant
BRASSICACEAE	**MUSTARD FAMILY**
*Brassica nigra**	Black mustard
Descurainia pinnata	Western tansy mustard
*Descurainia sophia**	Flix weed
CACTACEAE	**CACTUS FAMILY**
Cylindropuntia echinocarpa	Silver cholla
CHENOPODIACEAE	**CHENOPOD FAMILY**
*Salsola tragus**	Russian thistle
EUPHORBIACEAE	**SPURGE FAMILY**
Euphorbia albomarginata	Rattlesnake sandmat
GERANIACEAE	**GERANIUM FAMILY**
*Erodium cicutarium**	Redstem filaree
LAMIACEAE	**MINT FAMILY**
Monardella cf. *exilis* CRPR 4.2	Mojave monardella
Salvia columbariae	Chia sage
Scutellaria mexicana	Mexican bladdersage
LOASACEAE	**LOASA FAMILY**
Petalonyx thurberi ssp. *thurberi*	Thurber's sandpaper plant
POLEMONIACEAE	**PHLOX FAMILY**
Eriastrum densifolium ssp. *elongatum*	Giant eriastrum
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum baileyi var. *baileyi*	Bailey's buckwheat
Eriogonum fasciculatum	California buckwheat
Eriogonum inflatum	Desert trumpet
Eriogonum mohavense	Western Mojave buckwheat
Eriogonum plumatella	Yucca buckwheat

SCIENTIFIC NAME	COMMON NAME
SALICACEAE	**WILLOW FAMILY**
Populus fremontii ssp. *fremontii*	Fremont cottonwood
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii	Jimsonweed
Lycium cooperi	Peach thorn
*Solanum elaeagnifolium**	Horse nettle
ZYGOPHYLLACEAE	**CALTROP FAMILY**
Larrea tridentata	Creosote bush
ANGIOSPERMS (MONOCOTYLEDONS)	
AGAVACEAE	**AGAVE FAMILY**
Yucca brevifolia CC, COV	Joshua tree
Yucca schidigera	Mojave yucca
POACEAE	**GRASS FAMILY**
*Bromus tectorum**	Cheatgrass
*Cynodon dactylon**	Bermuda grass
Schismus sp.*	Schismus
Stipa hymenoides	Indian rice grass
Stipa speciosa	Desert needle grass
GYMNOSPERMS	
EPHEDRACEAE	**EPHEDRA FAMILY**
Ephedra nevadensis	Nevada Mormon tea
PINACEAE	**PINE FAMILY**
*Pinus halepensis**	Aleppo pine

California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR):

4.2: Plants of limited distribution; a watch list. Moderately threatened in California (20 to 80 percent occurrences threatened / moderate degree and immediacy of threat).

Notes: CC: Candidate for State Listing
COV: Apple Valley MSHCP/NCCP (Proposed) Covered Species

* Not native to California.

APPENDIX C

Wildlife Species Observed

SCIENTIFIC NAME	COMMON NAME
Apidae	Honey Bees and Stingless Bees
Apis mellifera	Honey bee
Tenebrionidae	Darkling beetles
Tenebrio molitor	Darkling beetle
Iguanidae	Iguanids
Callisaurus draconoides	Zebra-tailed lizard
Phrynosomatidae	Spiny Lizards
Sceloporus occidentalis	Western fence lizard
AVES	**BIRDS**
Accipitridae	Hawks and Eagles
Buteo lineatus	Red-shouldered hawk
Cathartidae	Vultures
Cathartes aura	Turkey vulture
Columbidae	Pigeons and Doves
*Columba livia**	Rock pigeon
Corvidae	Jays and Crows
Corvus corax	Common raven
Fringillidae	Finches
Haemorhous mexicanus	House finch
Laniidae	Shrikes
Lanius ludovicianus SSC, COV	Loggerhead shrike
Pandionidae	Ospreys
Pandion haliaetus	Osprey
Passerellidae	New World Sparrows
Artemisiospiza belli	Bell's sparrow
Passeridae	Old World Sparrows
*Passer domesticus**	House sparrow
Troglodytidae	Wrens
Campylorhynchus brunneicapillus	Cactus wren
Tyrannidae	Tyrant Flycatchers
Sayornis saya	Say's phoebe
Equidae	Horses
*Equus asinus**	feral burro

SCIENTIFIC NAME	COMMON NAME
Heteromyidae	Kangaroo Rats and Pocket Mice
Dipodomys sp.	Kangaroo rat
Leporidae	Rabbits and Hares
Lepus californicus	Black-tailed jackrabbit
Sylvilagus audubonii	Desert cottontail rabbit
Sciuridae	Squirrels
Ammospermophilus leucurus	White-tailed antelope squirrel
Otospermophilus beecheyi	California ground squirrel

Conservation Status:

SSC: CDFW Species of Special Concern

COV: Apple Valley MSHCP/NCCP (Proposed) Covered Species

* Non-native species

APPENDIX D

Potential for Occurrence of Special-Status Plant Species

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Acanthoscyphus parishii var. ***goodmaniana*** Cushenbury oxytheca	Fed: Ca: CNPS: MSHCP:	END none 1B.1 Prop Cov	May-Oct (4,000 - 7,800)	Occurs in carbonate, sandy soils or on talus slopes of pinyon and juniper woodland.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Allium howellii var. ***clokeyi*** Mt. Pinos onion	Fed: Ca: CNPS: MSHCP:	none none 1B.3 none	Apr-Jun (4,265 - 6,070)	Occurs in Great Basin scrub, along the edges of meadows and seeps, and in pinyon and juniper woodland.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Allium parishii Parish's onion	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	Apr-May (2,955 - 5,695)	Occurs in rocky soils of Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	**Low.** Suitable Joshua tree woodland and Mojavean desert scrub is present on the Study Area but lacks rocky soils. No CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Androsace elongata ssp. ***Acuta*** California androsace	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Mar-Jun (490 - 4,280)	Occurs in chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, and valley and foothill grassland.	**Presumed Absent.** While the Study Area lies within the elevational range for the species, no suitable habitat is present in the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Astragalus lentiginosus var. ***sierrae*** Big Bear Valley milk-vetch	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Apr-Aug (5,905 - 8,530)	Occurs in Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland, and upper montane coniferous forest. Sometimes found in gravelly or rocky soils.	**Presumed Absent.** While limited suitable Mojavean desert scrub is present on the Study Area, the Study Area is outside of the elevational range of the species. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Astragalus leucolobus Big Bear Valley woollypod	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	May-Jul (3,610 - 9,465)	Occurs in rocky soils of lower and upper montane coniferous forest, pebble (pavement) plain and pinyon and juniper woodland.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Boechera dispar pinyon rockcress	Fed: Ca: CNPS: MSHCP:	none none 2B.3 Prop Cov	Mar-Jun (3,935 - 8,335)	Occurs in granitic and gravelly soils of Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	**Presumed Absent.** While Joshua tree woodland and Mojavean desert scrub are present on the Study Area, they lack granitic, gravelly soils. Additionally, the Study Area is outside of the elevational range for the species. One recent CNDDB record (Occ. #55) was documented in 2011 approximately 2.5 miles southeast of the Study Area, in the nearby mountainous zone where soil conditions and elevation are suitable to support the species (CDFW 2024).

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Boechera parishii Parish's rockcress	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Apr-May (5,805 - 9,810)	Occurs in rocky soils and soils composed of quartzite on clay of pebble (pavement) plain, pinyon and juniper woodland, and upper montane coniferous forest. Sometimes found in carbonate soils.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Boechera shockleyi Shockley's rockcress	Fed: Ca: CNPS: MSHCP:	none none 2B.2 Prop Cov	May-Jun (2,870 - 7,580)	Occurs in pinyon and juniper woodland in carbonate, quartzite, rocky, or gravelly soils.	**Presumed Absent.** While the Study Area lies within the elevational range for the species, no suitable habitat is present in the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Calochortus palmeri var. ***palmeri*** Palmer's mariposa lily	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Apr-Jul (2,330 - 7,840)	Occurs in mesic soils of chaparral, lower montane coniferous forest, and meadows and seeps.	**Presumed Absent.** While the Study Area lies within the elevational range for the species, no suitable habitat is present in the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Calochortus plummerae Plummer's mariposa lily	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	May-Jul (330 - 5,580)	Occurs in granitic, rocky soils of chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland.	**Presumed Absent.** While the Study Area lies within the elevational range for the species, no suitable habitat is present in the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Canbya candida white pygmy-poppy	Fed: Ca: CNPS: MSHCP:	none none 4.2 Prop Cov	Mar-Jun (1,970 - 4,790)	Occurs in granitic, gravelly, or rocky soils of Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	**Moderate.** Suitable Joshua tree woodland and Mojavean desert scrub are present in the Study Area. One historic CNDDB record (Occ. # 5) was observed in 1985 approximately 3.3 miles west of the Study Area (CDFW 2024). Additionally, a recent Calflora record (ID # UCR0044307) was documented in 2005 approximately 7.1 miles southwest of the Study Area (Calflora 2024).
Castilleja lasiorhyncha San Bernardino Mountains owl-clover	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	May-Aug (4,265 - 7,840)	Occurs in mesic soils of chaparral, meadows and seeps, pebble (pavement) plain, riparian woodland, and upper montane coniferous forest.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Castilleja plagiotoma Mojave paintbrush	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	Apr-Jun (985 - 8,205)	Occurs in Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland, and in alluvial Great Basin scrub.	**Moderate.** Suitable Joshua tree woodland habitat is present in the Study Area. One recent Calflora record (ID #UCR0115238) was observed in 2016 approximately 4.4 miles southeast of the Study Area (Calflora 2024).
Chorizanthe spinosa Mojave spineflower	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Mar-Jul (20 - 4,265)	Occurs in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and playas. Sometimes found in alkaline soils.	**Low.** Suitable Joshua tree woodland and Mojavean desert scrub are present on the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Chorizanthe xanti var. ***leucotheca*** white-bracted spineflower	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Apr-Jun (985 - 3,935)	Occurs in Mojavean desert scrub, pinyon and juniper woodland, and on alluvial fans of coastal scrub. Sometimes found in sandy or gravelly soils.	**Low.** Suitable Mojavean desert scrub is present on the Study Area. One recent CNDDB record (Occ. # 59) was documented in 2017 approximately 6.2 miles south of the Study Area (CDFW 2024).
Cryptantha clokeyi Clokey's cryptantha	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Apr (2,380 - 4,480)	Occurs in Mojavean desert scrub.	**Low.** Suitable Mojavean desert scrub is present on the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Cymopterus deserticola desert cymopterus	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Mar-May (2,065 - 4,920)	Occurs in sandy soils of Joshua tree woodland and Mojavean desert scrub.	**Low.** Suitable Joshua tree woodland and Mojavean desert scrub are present in the Study Area. One historic CNDDB record (Occ. # 10) was documented in 1941 approximately 6.6 miles north of the Study Area (CDFW 2024).
Cymopterus multinervatus purple-nerve cymopterus	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	Mar-Apr (2,590 - 5,905)	Occurs in Mojavean desert scrub and pinyon and juniper woodland. Sometimes found in gravelly or sandy soils.	**Low.** Suitable Mojavean desert scrub is present in the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Deinandra mohavensis Mojave tarplant	Fed: Ca: CNPS: MSHCP:	none END 1B.3 Prop Cov	(Jan-May) Jun-Oct (2,100 - 5,250)	Occurs in mesic soils of chaparral, coastal scrub, and riparian scrub.	**Presumed Absent.** While the Study Area lies within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Diplacus johnstonii Johnston's monkeyflower	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	May - Aug (3200 - 9,580)	Occurs in lower montane coniferous forest, in disturbed areas, gravelly or rocky soils, along roadsides, and among scree.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Diplacus mohavensis Mojave monkeyflower	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Apr-Jun (1,970 - 3,935)	Occurs in Joshua tree woodland and Mojavean desert scrub. Often found in washes, sometimes found in sandy or gravelly soils.	**Low.** Suitable Joshua tree woodland and Mojavean desert scrub are present on the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Dudleya abramsii ssp. ***affinis*** San Bernardino Mountains dudleya	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Apr-Jul (4,100 - 8,530)	Occurs in pebble (pavement) plain, pinyon and juniper woodland, and upper montane coniferous forest. Sometimes found in granitic, quartzite, or carbonate soils.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. One recent CNDDB occurrence (Occ. # 46) was documented in 2011 approximately 2.4 miles southeast of the Study Area, in the nearby mountainous zone where the species' habitat is known to occur (CDFW 2024).
Eremogone ursina Big Bear Valley sandwort	Fed: Ca: CNPS: MSHCP:	THR none 1B.2 none	May-Aug (5,905 - 9,515)	Occurs in mesic, rocky soils of meadows and seeps, pebble (pavement) plain, and pinyon and juniper woodland.	**Presumed Absent.** While the Study Area lies within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Eremothera boothii ssp. ***boothii*** Booth's evening-primrose	Fed: none Ca: none CNPS: 2B.3 MSHCP: Prop Cov		Apr-Sep (2,675 - 7,875)	Occurs in Joshua tree woodland and pinyon and juniper woodland habitats. Often found in sandy flats and steep loose slopes.	**Low.** Suitable Joshua tree woodland is present on the Study Area. One historic CNDDB record (Occ. # 1) was documented in 1991 approximately 3.0 miles south of the Study Area (CDFW 2024).
Erigeron parishii Parish's daisy	Fed: THR Ca: none CNPS: 1B.1 MSHCP: none		May-Aug (2,625 - 6,560)	Occurs in Mojavean desert scrub and pinyon and juniper woodland. Usually found in carbonate soils, sometimes found in granitic soils.	**Presumed Absent.** While the Study Area is within the elevational range of the species, the Site only provides marginal Mojavean desert scrub habitat as it lacks carbonate soils for which this species has an affinity. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Eriogonum ovalifolium var. ***vineum*** Cushenbury buckwheat	Fed: END Ca: none CNPS: 1B.1 MSHCP: Prop Cov		May-Aug (4,595 - 8,005)	Occurs in carbonate soils of Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	**Presumed Absent.** The Study Area is outside of the elevational range for the species and provides only marginal Joshua tree woodland and Mojavean desert scrub habitat as it lacks carbonate soils for which this species has an affinity. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Erythranthe purpurea little purple monkeyflower	Fed: none Ca: none CNPS: 1B.2 MSHCP: none		May-Jun (6,235 - 7,545)	Occurs in pebble (pavement) plain, meadows and seeps, and upper montane coniferous forest.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Fimbristylis thermalis hot springs fimbristylis	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	Jul-Sep (360 - 4,395)	Occurs in alkaline meadows and seeps near hot springs.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Heuchera parishii Parish's alumroot	Fed: Ca: CNPS: MSHCP:	none none 1B.3 none	Jun-Aug (4,920 - 12,470)	Occurs in rocky soils of alpine boulder and rock fields, lower and upper montane coniferous forest, and subalpine coniferous forest. Sometimes found in carbonate soils.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Ivesia argyrocoma var. ***argyrocoma*** silver-haired ivesia	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Jun-Aug (4,800 - 9,710)	Occurs in pebble (pavement) plain, upper montane coniferous forest, and alkaline meadows and seeps.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Juglans californica southern California black walnut	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Mar-Aug (165 - 2,955)	Occurs in alluvial soils of chaparral, cismontane woodland, coastal scrub, and riparian woodland.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Lilium humboldtii ssp. ocellatum ocellated Humboldt lily	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Mar-Jul(Aug) (100 - 5,905)	Occurs in openings of chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Lilium parryi lemon lily	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Jul-Aug (4,005 - 9,005)	Occurs in mesic soils in lower and upper montane coniferous forest, meadows and seeps, and riparian forest.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Loeflingia squarrosa var. artemisiarum sagebrush loeflingia	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	Apr-May (2,295 - 5,300)	Occurs in sandy soils of desert dunes, Great Basin scrub, and Sonoran desert scrub.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Lycium parishii Parish's desert-thorn	Fed: Ca: CNPS: MSHCP:	none none 2B.3 none	Mar-Apr (445 - 3,280)	Occurs in coastal scrub and Sonoran desert scrub.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Lycium torreyi Torrey's box-thorn	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	(Jan-Feb) Mar-Jun (Sep-Nov) (-165 - 4,005)	Occurs in rocky and sandy soils of Mojavean desert scrub and Sonoran desert scrub. Often found in desert valleys, along streambanks and washes.	**Low.** Suitable Mojavean desert scrub with sandy soils is present on the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Monardella exilis Mojave monardella	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Apr-Sep (1,970 - 6,725)	Occurs in sandy soils of chenopod scrub, desert dunes, Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, Mojavean desert scrub, and pinyon and juniper woodland habitats.	**Present.** Suitable Mojavean desert scrub and Joshua tree woodland with sandy soils is present on the Study Area. This species was observed in the southwest corner of the Site during the biological reconnaissance survey conducted by ECORP on 9/10/2024 (Figure 5).
Muhlenbergia californica California muhly	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	Jun-Sep (330 - 6,560)	Occurs in mesic soils of chaparral, coastal sage scrub, lower montane coniferous forest, and meadows and seeps. Often found in seeps or along streambanks.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Muilla coronata crowned muilla	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Mar-Apr (May) (2,200 - 6,430)	Occurs in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	**High.** Suitable Joshua tree woodland and Mojavean desert scrub are present on the Study Area. Additionally, one recent Calflora record (ID #RSA0373770) was documented in 2010 approximately 0.50 mile southwest of the Study Area (Calflora 2024).

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Navarretia peninsularis Baja navarretia	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	(May) Jun-Aug (4,920 - 7,545)	Occurs in mesic soils of lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland, and in openings of chaparral.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Nemacladus gracilis slender nemacladus	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	Mar-May (395 - 6,235)	Occurs in cismontane woodland, and valley and foothill grassland. Sometimes found in gravelly or sandy soils.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. One historic Calflora record (ID # LA204521) was documented in 1941 approximately 5 miles south of the Study Area, in the nearby mountainous zone where the species' habitat is known to occur (Calflora 2024).
Opuntia basilaris var. ***brachyclada*** short-joint beavertail	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Apr-Jun (Aug) (1,395 - 5,905)	Occurs in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland habitats.	**Moderate.** Suitable Joshua tree woodland and Mojavean desert scrub is present on the Study Area. Multiple recent CNDDB records were revealed in the literature review, but not within 5 miles of the Study Area. The closest and most recent records (Occ. # 13 and 187) were documented in 2018 and 2017, approximately 5.6 miles southwest and 6.1 miles south of the Study Area, respectively (CDFW 2024).
Packera bernardina San Bernardino ragwort	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	May-Jul (5,905 - 7,545)	Occurs in pebble (pavement) plain, upper montane coniferous forest, and in mesic, sometimes alkaline meadows and seeps.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Pediomelum castoreum Beaver Dam breadroot	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Apr-May (2,000 - 5,005)	Occurs in sandy soils of Joshua tree woodland and Mojavean desert scrub. Often found along roadsides and in washes.	**Moderate.** Suitable Joshua tree woodland and Mojavean desert scrub is present on the Study Area. One historic CNDDB record (Occ. # 8) was documented in 1992 approximately 4 miles south of the Study Area (CDFW 2024).
Penstemon clevelandii var. ***mohavensis*** Mojave beardtongue	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	Mar- May (3,035 - 5,315)	Occurs in rocky soils of Mojavean desert scrub and pinyon and juniper woodland. Often found in granitic soils.	**Low.** Suitable Mojavean desert scrub is present on the Study Area, but lacks rocky, granitic soils. One historic CNDDB record (Occ. # 31) was documented in 1930 approximately 8.1 miles east of the Study Area (CDFW 2024).
Pentachaeta aurea ssp. ***aurea*** golden-rayed pentachaeta	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Mar-Jul (260 - 6,070)	Occurs in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Perideridia parishii ssp. ***parishii*** Parish's yampah	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	Jun-Aug (4,805 - 9,845)	Occurs in upper and lower montane coniferous forest, and in meadows and seeps.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Phlox dolichantha Big Bear Valley phlox	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	May-Jul (6,005 - 9,745)	Occurs in pebble (pavement) plain, and in openings of upper montane coniferous forest.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Rupertia rigida Parish's rupertia	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	Jun-Aug (2,295 - 8,205)	Occurs in chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, pebble (pavement) plain, and valley and foothill grassland.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Saltugilia latimeri Latimer's woodland-gilia	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Mar-Jun (1,310 - 6,235)	Occurs in chaparral, Mojavean desert scrub, and pinyon and juniper woodland. Often found in granitic soils and sometimes found in rocky or sandy soils and in washes.	**Low.** Suitable Mojavean desert scrub is present on the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Sclerocactus polyancistrus Mojave fish-hook cactus	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Apr -Jul (2,100 - 7,610)	Occurs in Great Basin scrub, Joshua tree woodland, and Mojavean desert scrub. Usually found in carbonate soils.	**Low.** Suitable Joshua tree woodland and Mojavean desert scrub is present on the Study Area. However, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Scutellaria bolanderi ssp. ***austromontana*** southern mountains skullcap	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Jun-Aug (1,395 - 6,560)	Occurs in mesic soils of chaparral, cismontane woodland, and lower montane coniferous forest.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Sidalcea hickmanii ssp. ***parishii*** Parish's checkerbloom	Fed: Ca: CNPS: MSHCP:	none RAR 1B.2 none	(May) Jun-Aug (3,280 - 8,200)	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest.	**Presumed Absent.** The Study Area is outside of the elevational range for the species, and no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Streptanthus bernardinus Laguna Mountains jewel-flower	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	May-Aug (2,200 - 8,205)	Occurs in chaparral and lower montane coniferous forest.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.
Symphyotrichum defoliatum San Bernardino aster	Fed: Ca: CNPS: MSHCP:	none none 1B.2 Prop Cov	Jul-Nov (5 - 6,695)	Occurs in cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, and vernally mesic valley and foothill grassland. Often found near ditches and springs and along streambanks.	**Presumed Absent.** While the Study Area is within the elevational range for the species, no suitable habitat is present on the Study Area. Additionally, no CNDDB or Calflora occurrences within 5 miles of the Study Area were revealed during the literature review.

Scientific Name **Common Name**	**Status**		**Bloom Period & Elevation (feet)**	**Habitat Requirements**	**Potential for Occurrence**
Syntrichopappus lemmonii Lemmon's syntrichopappus	Fed: Ca: CNPS: MSHCP:	none none 4.3 none	Apr-May (Jun) (1,640 - 6,005)	Occurs in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Sometimes found in gravelly or sandy soils.	**Moderate.** Suitable Joshua tree woodland is present on the Study Area. One historic Calflora record (ID # UCR-BPS-15700) was documented in 1978 approximately 4.3 miles northeast of the Study Area (Calflora 2024).
Yucca brevifolia western Joshua tree	Fed: Ca: CNPS: MSHCP:	none CAN CBR none	Mar-Jun (1,310 - 7,550)	Occurs in sagebrush scrub, desert scrub, pinyon and juniper woodland, desert grasslands, and Joshua tree woodland.	**Present.** Suitable desert scrub and Joshua tree woodland are present on the Study Area. This species was observed in the northwest and southwest portions of the Site during the biological reconnaissance survey conducted by ECORP on 9/10/2024.

Status Codes:

Federal Designations:
(Federal Endangered Species Act)
END: federally listed, endangered
THR: federally listed, threatened

State Designations:
(California Endangered Species Act)
END: state-listed, endangered
THR: state-listed, threatened
CAN: Candidate for state listing
RAR: California Rare

Apply Valley MSHCP Designations:
(Proposed Apple Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan)
Prop Cov: Proposed Covered species

CNPS Ranking:

1A: Presumed extinct
1B: Rare, threatened, or endangered in California and elsewhere
2B: Rare, threatened, or endangered in California, but more common elsewhere
3: Review list of plants requiring more study
4: Plants of limited distribution watch list

CNPS Threat Code:

0.1: Seriously threatened in California
0.2: Fairly threatened in California
0.3: Not very threatened in California

Source: California Natural Diversity Data Base (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) Apple Valley South, Apple Valley North, Fairview Valley, Silverwood Lake, Lake Arrowhead, Butler Peak, Hesperia, Fifteenmile Valley, Victorville, 7.5-minute quads.

APPENDIX E

Potential for Occurrence of Special Status Wildlife Species

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Invertebrates				
Bombus crotchii Crotch bumble bee	Fed: Ca: MSHCP:	none **CAN** none	Occurs in coastal California east to the Sierra-Cascade crest and south into Mexico. Occurs in open grassland and scrub habitats. Prefers a diet consisting of certain plant species including milkweeds, dusty maidens, lupines, medics, phacelias, sages, clarkias, poppies, and wild buckwheats. Nests are often located underground in abandoned rodent nests or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees.	**Moderate Potential:** Suitable nesting and foraging habitat is present throughout the Study Area Area. Open ground and small mammal burrows provide potential nesting habitat. One historic occurrence (OCC #174) was documented in CNDDB within five miles of the Study Area.
Euphydryas editha quino quino checkerspot butterfly	Fed: Ca: MSHCP:	**END** none none	Occurs in sunny openings within chaparral and coastal sage scrub in parts of Riverside and San Diego counties. Occurs on hills and mesas along the coast. Requires high densities of food plants *Plantago erecta*, P. *insularis*, and *Orthocarpus purpurescens*.	**Presumed Absent:** No suitable chaparral or coastal sage scrub habitats occur within the Study Area. In addition the Study Area is outside the known range of the species. No historic or recent occurrences were documented in CNDDB within five miles.
Helminthoglypta mohaveana Victorville shoulderband	Fed: Ca: MSHCP:	none none AV Planned	Occurs in rock outcroppings and talus areas that have appropriate moisture and shaded microhabitats.	**Presumed Absent:** No suitable rock outcrop or talus habitats with moist or shaded microhabitats occur within the Study Area. No historic or recent occurrences were documented in CNDDB within five miles.
Plebulina emigdionis San Emigdio blue butterfly	Fed: Ca: MSHCP:	none none AV Planned	Intermittent streamsides and dry riverbeds in deserts and chaparral/shrublands. Ranges from southern San Joaquin Valley and Mojave Desert south to Victorville.	**Presumed Absent:** No suitable intermittent streamsides and dry riverbeds occur within the Study Area. No historic or recent occurrences were documented in CNDDB within five miles.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Fish				
Gila orcuttii arroyo chub	Fed: Ca: MSHCP:	none SSC none	Creeks, streams, and rivers with areas of slow moving water with sand or mud bottoms. Ranges from San Diego to San Luis Obispo county.	**Presumed Absent:** No suitable creeks, streams, and rivers with areas of slow moving water occur within the Study Area Area. In addition, no recent or historic occurrences were documented in CNDDB.
Siphateles bicolor mohavensis Mohave tui chub	Fed: Ca: MSHCP:	END END/FP AV Planned	Occurs in aquatic, artificial flowing waters, and artificial standing waters habitat. Endemic to the Mojave River basin, adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.	**Presumed Absent:** No suitable aquatic, artificial flowing waters, or artificial standing water habitats occurs within the Study Area. Although three historic occurrences (OCC #12, 16, 13) were documented within 5 miles of the Study Area.
Amphibians				
Anaxyrus californicusarroyo toad	Fed: Ca: MSHCP:	**END** SSC AV Planned	Occurs in desert wash, riparian scrub, riparian woodland, south coast flowing waters, and south coast standing waters habitat. Found in semi-arid regions near washes or intermittent streams. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores. Often found in loose, gravelly areas of streams.	**Presumed Absent:** No suitable desert wash, riparian scrub, riparian woodland, south coast flowing waters or south coast standing waters habitats occurs within the Study Area. Two historic occurrences (OCC #28, 120) were documented within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Rana draytonii California red-legged frog	Fed: Ca: MSHCP:	**END** SSC AV Planned	Occurs in aquatic, artificial flowing waters, artificial standing waters, freshwater marsh, marsh & swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters, south coast standing waters, and wetland habitats. Requires 11-20 weeks of permanent water for larval development. Often found in lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	**Presumed Absent:** No suitable aquatic features such as flowing waters, freshwater marsh, marsh & swamp, riparian forest, riparian scrub or standing water habitat occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.
Rana muscosa southern mountain yellow-legged frog	Fed: Ca: MSHCP:	**END** **END** none	Ponds, streams, lakes, and isolated pools in southern Sierra Nevada Mountains and rocky streams within narrow canyons and the chaparral belt in Southern California mountains.	**Presumed Absent:** No suitable ponds, streams, lakes, and isolated pools occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.
Reptiles				
Actinemys pallida southwestern pond turtle	Fed: Ca: MSHCP:	**CAN THR** none AV Planned	Ponds, marshes, rivers, streams, and irrigation ditches with basking sites and upland habitat less than 0.3 miles away for egg laying. Below 6,000' elevation	**Presumed Absent:** No suitable ponds, marshes, rivers, streams, and irrigation ditches with basking sites occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Anniella stebbinsi Southern California legless lizard	Fed: Ca: MSHCP:	none SSC none	Occurs in moist warm loose soil with plant cover. Can occur in sparsely vegetated areas of coastal sand dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, alluvial fans, and stream terraces with sycamores, cottonwoods, or oaks.	**Presumed Absent:** No suitable moist warm loose soils with plant cover within coastal sand dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, alluvial fans, and stream terraces with sycamores, cottonwoods, or oaks occurs within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.
Charina umbratica southern rubber boa	Fed: Ca: MSHCP:	none **THR** none	Under rocks, woody debris, or in crevices in conifer or conifer-mixed semiopen forests and woodlands, patchy chaparral/shrublands, and meadows.	**Presumed Absent:** No suitable rocks, woody debris, or crevices in conifer or conifer-mixed semiopen forests and woodlands habitats occur within the Study Area. One recent occurrence (OCC #99) and one historic occurrence (OCC #97) were documented within five miles of the Study Area.
Gopherus agassizii desert tortoise	Fed: Ca: MSHCP:	**THR** **THR** AV Planned	Occurs in Joshua tree woodland, Mojavean desert scrub, and Sonoran desert scrub habitats. Most commonly found in desert scrub, desert wash, and Joshua tree habitats. Requires friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	**Low Potential:** Marginally suitable desert scrub and Joshua tree woodland occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Phrynosoma blainvillii coast horned lizard	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinon & juniper woodlands, riparian scrub, riparian woodland, and valley & foothill grassland habitats. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. Most commonly found in lowlands along sandy washes with scattered low bushes.	**Presumed Absent:** No suitable chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinon & juniper woodlands, riparian scrub, riparian woodland or valley & foothill grassland habitats occur within the Study Area. In addition, two historic occurrences were documented within five miles of the Study Area.
***Thamnophis* hammondii** two-striped gartersnake	Fed: Ca: MSHCP:	none SSC none	Found near water sources, such as pools, creeks, and riparian areas. Associated with oak woodland, willow, coastal sage scrub, scrub oak, sparse pine, chaparral, and brushland.	**Presumed Absent:** No suitable water sources, such as pools, creeks, riparian areas occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.
Birds				
Accipiter cooperii Cooper's hawk	Fed: Ca: MSHCP:	none WL AV Planned	Occurs within forests and woodlands. Also occurs in neighborhoods and parks. Nests are typically built-in pines, oaks, Douglas-fir, birches, spruces, and other taller trees that occur on flat ground and in dense woods.	**Presumed Absent:** No suitable forests and woodland habitats occur within the Study Area. In addition, only two historic occurrences (OCC #5 & 4) were documented but not within five miles of the Study Area.
Agelaius tricolor tricolored blackbird	Fed: Ca: MSHCP:	none **THR**/SSC none	Occurs in freshwater marsh, swamp, and wetland habitats. Largely endemic to California. Highly colonial species, most numerous in Central Valley & vicinity. Requires open water, protected nesting substrate, and foraging area with insect prep within a few kilometers of the colony.	**Presumed Absent:** No suitable freshwater marsh, swamp, and wetland habitats occur within the Study Area. One historic occurrence (OCC #760**)** was documented in 2003 but not within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Aquila chrysaetos golden eagle	Fed: Ca: MSHCP:	none FP AV Planned	Occurs in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinon & juniper woodlands, upper montane coniferous forest, and valley & foothill grassland habitats. Found in rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also large trees in open areas.	**Low Potential:** No forest, woodland, prairie, grassland, & rolling foothill habitats occurs on the Study Area. In addition, no recent or historic occurrences were documented in CNDDB. Nesting activities are not expected on this site because no cliff-walled canyons are located on the Study Area. However, it is possible that the golden eagle could use the site for foraging and a stopover during migration.
Asio otus long-eared owl	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in cismontane woodland, Great Basin scrub, riparian forest, riparian woodland, and upper montane coniferous forest habitats. Found in riparian bottomlands grown to tall willows and cottonwoods. Also found in belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Presumed Absent:** No suitable cismontane woodland, Great Basin scrub, riparian forest, riparian woodland, and upper montane coniferous forest habitats occurs within the Study Area. One historic occurrence (OCC #17) was documented within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Athene cunicularia burrowing owl	Fed: Ca: MSHCP:	none SSC AV Planned	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Occurs in coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley & foothill grassland habitats. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**High Potential:** Suitable desert scrub habitat with low growing vegetation occurs within the Study Area. In addition one potential burrowing owl burrow (no sign) and California ground squirrel activity was observed within the Study Area. There were eight recent occurrences (OCC #755, 872, 924, 1542, 1543, 1544, 1545, 1546) documented within five miles of the Study Area.
Buteo swainsoni Swainson's hawk	Fed: Ca: MSHCP:	none THR AV Planned	Occurs in Great Basin grassland, riparian forest, riparian woodland, and valley & foothill grassland habitats. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands or alfalfa/grain fields supporting rodent populations.	**Presumed Absent:** No suitable Great Basin grassland, riparian forest, riparian woodland and valley & foothill grassland habitats occur within the Study Area. In addition there were no records documented within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Circus hudsonius northern harrier (nesting)	Fed: Ca: MSHCP:	none none AV Planned	Breeds in mesic grasslands, prairies, and meadows; wetlands, riparian woodland, and high-desert shrubsteppe. Nests are often on the ground and in a dense clump of, often tall, vegetation. In wetland habitats it often nests in a dense clump of willows, grasses, sedges, reeds, bulrushes, and cattails. During winter, this species uses open habitats characterized by herbaceous vegetation such as coastal sand dunes, deserts, old fields, grasslands, and marshes.	**Presumed Absent:** No suitable mesic grasslands, prairies and meadows; wetlands, riparian woodland, or high-desert shrubsteppe habitats occur within the Study Area. However, it is possible that the northern harrier could use the site for foraging and a stopover during migration. In addition, no recent or historic occurrences were documented in CNDDB.
Coccyzus americanus occidentalis western yellow-billed cuckoo	Fed: Ca: MSHCP:	THR END AV Planned	Occurs in riparian forest habitat. Nests along the broad, lower flood bottoms of larger river systems in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Presumed Absent:** No suitable riparian forest habitat occurs within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB.
Empidonax traillii extimus southwestern willow flycatcher	Fed: Ca: MSHCP:	**END** **END** AV Planned	Occurs in riparian woodland habitat in Southern California.	**Presumed Absent:** No suitable riparian woodland habitat occurs within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Falco mexicanus prairie falcon	Fed: Ca: MSHCP:	none WL AV Planned	Open habitats such as plains, prairies, steppe, and mountainous areas. Nests in a sheltered ledge of rocky cliffs.	**Presumed Absent:** No suitable open habitats such as plains, prairies, steppe, or meadows occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Haliaeetus leucocephalus bald eagle	Fed: Ca: MSHCP:	none **END** none	Forested areas, and sometimes dry open uplands, along the coast or near large open bodies of water including lakes. Nests in tall trees or on cliffs or pinnacles near open water.	**Low Potential:** No suitable forested areas, dry open uplands, or large bodies of water occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area. However, it is possible that the golden eagle could use the site for foraging and a stopover during migration.
Icteria virens yellow-breasted chat	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in riparian forest, riparian scrub, and riparian woodland habitats. Nests in low, dense riparian, consisting of willow, blackberry, wild grape. Forages and nests within 10 ft of ground.	**Presumed Absent:** No suitable riparian forest, riparian scrub and riparian woodland habitats occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Lanius ludovicianus loggerhead shrike	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinon & juniper woodlands, riparian woodland, and Sonoran desert scrub habitats. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Present:** One individual was observed calling throughout the site during the biological reconnaissance survey. Suitable habitat such as Joshua tree woodland and perching habitat are present within the Study Area. No recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Myiarchus tyrannulus brown-crested flycatcher (nesting)	Fed: Ca: MSHCP:	none none AV Planned	Saguaro deserts, and woodlands along streams and rivers. Nests in natural tree cavities or abandoned cavity nests.	**Presumed Absent:** No suitable Saguaro desert or woodland habitats near a stream or river occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Piranga rubra summer tanager	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in riparian forest habitat. Summer resident of desert riparian along lower Colorado River and locally elsewhere in California deserts. Requires cottonwood-willow riparian for nesting and foraging. Prefers older, dense strands along stream.	**Low Potential:** Although riparian forest habitat is not present within the Study Area, the location of the Study Area within the desert provides suitable habitat for summer tanager. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Pyrocephalus rubinus vermilion flycatcher (nesting)	Fed: Ca: MSHCP:	none SSC AV Planned	Arid country, scrub, savannah, and riparian woodlands along streams. Less often in dry grasslands or deserts with scattered trees.	**Presumed Absent:** No suitable arid country, scrub, savannah, or riparian woodland habitats along a stream occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Setophaga petechia yellow warbler	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in riparian forest, riparian scrub, and riparian woodland habitats. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	**Presumed Absent:** No suitable riparian forest, riparian scrub or riparian woodland habitats occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Toxostoma bendirei Bendire's thrasher	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in Joshua tree woodland and Mojavean desert scrub habitats. Local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats. Nests in cholla, yucca, palo verde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.	**Low Potential:** Suitable Joshua tree woodland habitat was observed in northeast portion of the Study Area. In addition potential nesting habitat such as cholla and thorny shrubs were observed within the Study Area. However, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Toxostoma lecontei LeConte's thrasher	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in desert wash, Mojavean desert scrub, and Sonoran desert scrub habitats. Desert resident, primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub areas. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 ft above ground.	**Moderate Potential:** Suitable desert scrub habitat was present within the northeast portion of the Study Area. Silver cholla within the Study Area provides limited nesting habitat for Le Conte's thrasher. In addition, there are three historic occurrences (OCC #17, 161, 162) documented within five miles of the Study Area. However, all three are over 50 years old.
Vireo bellii pusillus least Bell's vireo	Fed: Ca: MSHCP:	**END** **END** AV Planned	Occurs in riparian forest, riparian scrub, and riparian woodland habitats. Summer resident of Southern California in low riparian vegetation in the vicinity of water or in dry river bottoms. Nests placed along margins of bushes or on twigs Study Areaing into pathways, usually willow, Baccharis, and mesquite.	**Presumed Absent:** No suitable riparian forest, riparian scrub or riparian woodland habitats occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Vireo vicinior gray vireo	Fed: Ca: MSHCP:	none SSC none	Occurs in dry, chaparral habitat. Found west of desert, in chamise-dominated habitat in the mountains of the Mojave Desert, associated with juniper and artemisia. Forage, nest, and sing in areas formed by a continuous growth of twigs, 1-5 ft above ground.	**Presumed Absent:** No suitable dry or chaparral habitats occur within the Study Area. However, two historic occurrences (OCC #27 and 34) were documented within five miles of the Study Area.
Mammals				

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Taxidea taxus American badger	Fed: Ca: MSHCP:	none SSC none	Open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones.	**Presumed Absent:** No suitable open habitat with friable soil such as grasslands, brushlands, open chaparral or riparian zones occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Antrozous pallidus pallid bat	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, and valley & foothill grassland habitats. Most commonly found in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Low Potential:** Desert scrub within the Study Area provides marginal foraging habitat for pallid bat. Roosting activities are not expected on this site because there are no rocky areas that would protect them from high temperatures. One recent occurrence (OCC #429) was documented within five miles of the Study Area.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in desert wash, pinon & juniper woodlands, and Sonoran desert scrub habitats. Found in desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, and pinyon-juniper. Prefer sandy, herbaceous areas usually in association with rocks or coarse gravel.	**Presumed Absent:** No suitable desert wash, pinon & juniper woodland, or Sonoran desert scrub habitats occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Corynorhinus townsendii Townsend's big-eared bat	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in broadleaved upland forest, chaparral, chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, meadow and seep, Mojavean desert scrub, riparian forest, riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, upper montane coniferous forest, and valley & foothill grassland habitats. Found throughout California, most commonly in mesic sites. Roosts in the open, hanging from walls and ceilings. Extremely sensitive to human disturbance.	**Low Potential:** Moderately suitable Joshua tree woodland habitat occurs within the Study Area. Structures along Outpost Road provide potential roosting habitat for Townsend's big-eared bat. One historic occurrence (OCC #18) was documented in 1955 within five miles of the Study Area.
Glaucomys oregonensis californicus San Bernardino flying squirrel	Fed: Ca: MSHCP:	none SSC none	Occurs in broadleaved upland forest and lower montane coniferous forest.	**Presumed Absent:** No suitable broadleaved upland forests or lower montane coniferous forest habitat occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Microtus californicus mohavensis Mohave River vole	Fed: Ca: MSHCP:	none SSC AV Planned	Occurs in riparian scrub habitat. Found only in weedy herbaceous growth in wet areas along the Mojave River. May be found in some irrigated pastures. Burrows in soft soil. Feeds on leafy parts of grasses, sedges, and herbs. Clips grasses to form runways from burrow.	**Presumed Absent:** No suitable riparian scrub habitat occur within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Ovis canadensis nelsoni desert bighorn sheep	Fed: Ca: MSHCP:	none none AV Planned	Open, steep, and rocky terrain in arid desert mountains particularly in southeastern California.	**Presumed Absent:** No suitable open, steep or rocky terrain occurs within the Study Area. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.

Scientific Name **Common Name**	**Status**		**Habitat Requirements**	**Potential for Occurrence**
Vulpes macrotis arsipus desert kit fox	Fed: Ca: MSHCP:	none SSC AV Planned	Flat, arid regions such as desert scrub, chaparral, and grassland habitats. Often found in loose soils for constructing dens.	**Presumed Absent:** Although desert scrub does occur within the Study Area, the terrain of the desert scrub does not support desert kit fox. In addition, no recent or historic occurrences were documented in CNDDB within five miles of the Study Area.
Xerospermophilus mohavensis Mohave ground squirrel	Fed: Ca: MSHCP:	none **THR** AV Planned	Occurs in chenopod scrub, Joshua tree woodland, and Mojavean desert scrub habitats, often associated with winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*). Restricted to the Mojave desert. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover.	**Presumed Absent:** Some suitable desert scrub habitat was present on the Study Area, but no winter fat or spiny hopsage was identified on site. One historic occurrence (OCC #263) was documented in 1921 within five miles of the Study Area.

Status Codes:

Federal Designations:

(Federal Endangered Species Act)

END: federally listed, endangered

THR: federally listed, threatened

FC: federal candidate species

State Designations:

(California Endangered Species Act)

END: state-listed, endangered

THR: state-listed, threatened

CAN: Candidate for state listing

SSC: Species of Special Concern

FP: Fully Protected Species

Other Designations:

AV Planned: Falls under the draft Apple Valley MSHCP

CNPS Ranking:

1A: Presumed extinct

1B: Rare, threatened, or endangered in California and elsewhere

2B: Rare, threatened, or endangered in California, but more common elsewhere

3: Review list of plants requiring more study

4: Plants of limited distribution watch list

CNPS Threat Code:

0.1: Seriously threatened in California

0.2: Fairly threatened in California

0.3: Not very threatened in California

Source: California Natural Diversity Data Base (CNDDB) Apple Valley South, Apple Valley North, Fairview Valley, Silverwood Lake, Lake Arrowhead, Butler Peak, Hesperia, Fifteenmile Valley, Victorville, 7.5-minute quads.